Canada.   Dept. of Communications.

   Written comments and reactions to
the Canadian Computer/Communications
Task Force report "Branching Out":
an assessment.
Ottawa, Feb. 1973.

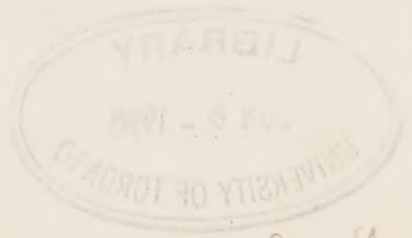Written comments and reactions to the Canadian Computer/Communications
Task Force Report "Branching Out" :   An Assessment.

Computer/Communications
Coordination Group
Ottawa.   February, 1973.

Written Comments and Reactions to the Canadian Computer/Communications
Task Force Report "Branching Out" : An Assessment.

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INTRODUCTION

In response to the Minister's request for comments from interested parties and the general public to "Branching Out", 138 letters had been received by early January. The majority consisted of acknowledgements for receipt of the Report, of indications of intent to comment, and of matters largely unconnected with the Task Force Report. Fifty-six respondents submitted comments in varying degrees of detail, and it is with these that this assessment is concerned.

The assessment process was difficult for a number of reasons. No commonality was apparent in the way in which the comments were made: a few respondents dealt with each recommendation sequentially, while others concentrated upon those recommendations of specific interest to themselves without intimating their degree of concurrence for the remainder. Yet others were mainly concerned with the concepts employed, with the thrust of the Report, or with parts of the text. In addition, the particular interest or point of view of the respondent was very much in evidence among those organizations which play a direct part in the computer/communications environment. The conflicts which were described in "Branching Out" were again reflected in many of the comments.

The purpose of this assessment is to provide a convenient record of the essence of respondents' written comments; to impact a "flavour" or a "feeling" for the written comments in a qualitative sense; and to highlight those areas of consensus or conflict that are apparent from the reactions of respondents.

In the government analysis of "Branching Out" and responses from the public, the full source documents were used. This report merely provides a convenient summary, and quotes of all comments by all correspondents on all topics are not included.

METHODOLOGY

The methods employed in this assessment attempted to portray as objectively as possible the reactions of respondents. Anonymity of comments has been retained by allocating to each respondent a random number for reference purposes.

The actual approach evolved as follows:

(i) Briefs were sorted into rough classifications, as determined by the segment of the computer/ communications environment in which the responding organization is normally found. These were:

> Users of computers and communications;
> Associations - industry and professional;
> Computer services firms;
> Equipment manufacturers and suppliers;
> Telecommunications carriers; and
> Miscellaneous organizations (not otherwise provided for);

It was expected that this classification would provide some commonality of reactions by segment, and facilitate the assessment process.

(ii) It was considered that the comments generally would prove to be responses to one or more of the following:

(a) to the concepts employed by the Task Force, in terms of basic approach to the topic, to the points of departure, to the framework employed, or to the underlying rationale;

(b) to the Task Force recommendations either in their totality (the thrust of the report) or singly;

(c)   to the Task Force suggestions for institutional
      arrangements; and

(d)   all other comments, particularly those concerned
      with report omissions.

Check sheets were designed on the basis of this breakdown,
with one check sheet for each of the segments mentioned
in point (i).

(iii)   The essence of each of the comments was extracted from the
        briefs and written on the appropriate check sheet. It
        became apparent that the Associations segment was misleading.
        Industry associations particularly were found to be re-
        flecting views identical to their member organizations, and
        two industry associations (31, 49), for example, stated
        that they were commenting on behalf of their members as
        users of computer/communications goods and services.
        Consequently, the "Associations" category was dispensed
        with and the comments were placed in one of the remaining
        categories. A further problem emerged when it was recog-
        nized that certain comments had been made from the viewpoint
        of one segment, and other comments within the same brief
        from a different viewpoint. Thus, one respondent (38),
        was generally treated as a user, but in at least one instance
        it commented from the viewpoint of a computer services
        supplier. These changes between categories were taken
        into consideration.

(iv) When the essence of all of the comments had been
recorded, the analytical and report writing phases
were undertaken concurrently. The order in which this
was carried out corresponded to the commentary classifications
listed in point (ii), viz., concepts, recommendations,
suggestions and other comments. In each instance, it was
decided to append where appropriate an observation which
was intended to highlight a consensus or clash of opinion,
or reflect the Task Force viewpoint in "Branching Out"
in the light of the comments by respondents. These
observations were used at a later stage to arrive at the
summary and conclusions.

It should be noted that in many instances the comments recorded in
this assessment are not literal transcriptions from respondents' briefs.
Rather, they attempt to convey the essence of the point that the re-
spondent has made. It was frequently necessary also to substitute pro-
nouns and other words in order to protect the anonymity of the respondent.

1   Reactions to Concepts

A number of respondents were concerned with the approach used in arriving at the Task Force recommendations. Some contend that, had a different approach been taken, the results in terms of policy formulation and recommendations might well have differed in substance and direction. In this respect, three main arguments were presented, and these are considered below. It should be noted, however, that a number of these respondants, while disagreeing with the Task Force conceptual approach, nevertheless indicated general approval of the thrust and the recommendations of the Report.

1.1

The first contention is that the term "Computer/Communications" is confusing and misleading, and that it has misled the Task Force in its deliberations. Examples of the concern expressed are:

"....the consideration of computer/communications in combination is distorting. The communications segment is largely independent of subject content; therefore, it requires only technological competence...."(38); "....computer/ communications are really communication facilities linking computers. On the network side, there is good justification for Government regulation, but computer activity is self-regulated by normal competition, and hence has no need for government regulation..."(56); "....we do not agree that computer/communications encompasses all of the computer industry. Data processing applications will continue to develop in stand-alone environments. Policies which may be suited to communications-served data processing services industry, may not be appropriate for the data processing industry or for the telecommunications industry..."(28);

"...the report treats the telecommunications and data processing industries as one. They have been two distinct and parallel, but related industries. The second is highly competitive, while the first is tightly regulated, with the result that the grouping together will put unnecessary restraints on the development of the data processing industry...."(25); "...the report puts too much emphasis on service, and the marriage of computers and communications has been overstated...."(9); "...there is a tendency to blur the distinction between data processing and telecommunication services, and this distinction should be a major consideration in formulating government policy...."(4); "....the Task Force has overstated the case for computer services by remote access. There are significant problems in communications, and this has resulted in the overstatement of need for Government involvement in the computer industry. Computers and communications should be addressed as separate entities. Increased institutional arrangements, new regulatory procedures, and generally increased government involvement are premature..."(24).

In sum, these comments imply that when computer/communications are considered in their totality, there is a tendency to bring many of the regulatory aspects and government involvement in telecommunications to bear upon the highly competitive computer industry.

On the other hand, at least two respondents consider "computer/communications" to be a subset of telecommunications, and have a different focus of concern. One respondent (31) believes that "....the

telecommunications environment should be considered as an entity, and not approached in policy formation in a piece-meal fashion....". Another (48) stated that "...there is no point in attempting to establish principles, and there can be no satisfactory mechanism for achieving objectives until policy questions relating to the whole telecommunicatons arena are resolved...."

Observation:

With regard to concerns on combining computers and communications, the Task Force holds the following positions:

i) at the level of policy development, the interactions and the interdependencies between the computer industry, the computer services industry, parts of the communications industry, and the telecommunications carriers are so interwoven, that it would have been dangerous to have treated any one in isolation without due consideration for the cross-impacts that occur;

ii) while the use of communications in conjunction with computers may not be large at present, the evidence points to greatly increased use in the future, together with a further blurring of the traditional boundaries; and

iii) although the Task Force employed a combined approach to the subject of policies for computer/communications it refrained from prescribing a regulatory environment for the computer or the computer services industry. Most of the respondents who believe the combined approach to have been wrong, nevertheless agree with the constraints recommended for the carriers, the banks, and the universities, if they choose to offer data processing services.

With regard to the question that computer/communications cannot be considered except as part of the total telecommunications environment or industry, the Task Force considers that:

(iv) issues exist outside the telecommunications environment which have an important impact on the computer/communications environment in Canada. These issues which are of particular concern relate to the use of computers, and include social issues, manpower training and development, industry support, data bank services, and software standards.

(v) While the Task Force subscribed to the view that it is necessary to examine computer/communications within a larger context, it cannot be done within the confines of telecommunications policies alone.

1.2

The second contention concerning the conceptual approach adopted by the Task Force suggests that it paid too much attention to the means or facilities of computer/communications, rather than to the purposes which the technology should serve. For example, "...the report requires more emphasis on the 'national need', i.e. there is information to be moved and processed. Therefore, the first consideration in policy development must be a knowledge of information needs on a national basis..." (42). In a similar vein, another respondent (38) states that ".... the blame rests with the terms of reference for concern with the means, without instruction to study diverse types of information. There are different types of policy requirements for 'private commercial transactions' as compared with, for example, 'knowledge in the public domain'....".

Observation:

The Task Force does not necessarily disagree with this contention, as it may have been an equally valid approach in dealing with the issues in computer/communications. However, there are at least two points which raise serious questions as to whether it would have been a viable alternative. First, even had it been possible to establish information needs on a national basis, there seems to be implicit in the idea that there is a 'right way' of moving and processing particular classes of information. The fact is that users employ a large variety of techniques to meet their needs, and, apart from the curtailment of innovation which single-solution methods imply, it would be extremely doubtful if user solutions could be channelled sufficiently well to meet the type of global arrangements on which the idea is predicated. Second, the sheer immensity of the task of determining information needs on a national basis prohibited its undertaking during the life of the Task Force. And third, most of the institutions visited were unable to give information on their projected requirements, or even give quantitative information on their present work load.

1.3

The third type of criticism of the Task Force conceptual approach has been made by two social institutions (21)(16). Their prime allegation is that the Task Force failed to have as its overriding concern, the social needs of Canadians. This failure, they said, was brought about by focussing its approach on the institutional use of computer technology, and it was thus unable to ensure that the potential capabilities of computer/communications technology would be closely harnessed to serve the needs of people. The same viewpoint,

although in a much more limited form, has been mentioned by a research organization (9).

While this summarizes the main thrust of these briefs, there are many particular criticisms which alter the emphasis, and sometimes the detailed direction of their concern. It is therefore appropriate to assess them separately.

Among the particular criticisms of respondent (21), attention was first directed to an endorsement of the Consumers' Association of Canada proposal for a Community Information Network which called for public participation in the formulation of communications policy and for government support of the development of large-scale data banks for the use of families and households. The respondent was dismayed that the Task Force avoided a forthright endorsement of this proposal.

Second, the respondent regretted that the Task Force solicited opinions chiefly from those directly involved in computer/communications, and that its proceedings were not more open and more visible to the public. Nevertheless, the response had been made in the hope that a willingness still existed to broaden the context of the Task Force's work, and that these broader views would be accorded a weight at least equal to the opinions of those whom the Task Force has defined as users and suppliers.

Third, the respondent related much criticism to what was described as being left unsaid. According to this viewpoint, the Task Force had nothing to say about the impact of the computer on the quality of the human processes of communicating and exchanging information and ideas -- "the roots of any communications policy". The submission went on to say that: the Task Force appeared oblivious of the need to reduce barriers to communications and to human interactions; any intimation

that many of the assumptions underlying our economic and technical
policies and our public institutions were today subject to fundamental
questioning on the part of Canadians was notably absent; none of this
kind of fundamental questioning of traditional assumptions was reflected
in the Report; the Task Force seemed unaware of such questions and
challenges, and it therefore seemed to have lived more in a hypothetical
world than in the real world of the present.

Fourth, it was alleged that this lack of fundamental questioning had
led the Task Force to reinforce traditional values, to substantiate
what exists, to accept our present institutions. Accordingly, mechanized
knowledge transfer systems had been envisioned in the context of the
continuation of the predominance of existing educational institutions,
rather than in the context of the possibility of more flexible, fluid
and less institutionalized learning environments. Similarly, the ap-
plication of computer technology to the field of health care had taken
for granted the predominance of existing units of care (including com-
munity health clinics as well as hospitals). The respondent asserted
that it should not be necessary to gain access to legal information
through a lawyer nor real estate information through a broker. Instead,
the respondent would increasingly discourage "our professions and
corporations from playing their traditional roles as gate-keepers and
toll-collectors who stand between families and the information they
need for household decisions." Computer technology and communications
policy generally, in the respondent's view, should be placed directly
at the service of people rather than indirectly through the media of
our present institutions.

Fifth, the respondent was very concerned about the Task Force recommendations and their underlying rationale, for the reasons which have been outlined. This concern carried over to the suggested institutional arrangements, and in particular to the suggested Focal Point. The respondent believed that in a context which failed to question the technological imperative and the primacy of economic and technical considerations, the activities of the Focal Point might only "serve to reinforce the ability of those who control the computer, aware or unaware, to shape and to control individual, family and group activity." In the respondent's view, it was highly unlikely that a Focal Point composed of government experts would be able to deal with the fundamental issues which the respondent had raised; these could be dealt with "only through the involvement of the public and of social critics -- the artists -- in our society." Then, it was felt, the implications of spreading computer technology could be fully comprehended and sensible policy approaches could be determined.

Finally, the respondent urged the government to re-examine the fundamental issues underlying the Task Force Report prior to implementing any of the recommendations, and to involve the public in that re-examination. A list was given of a number of basic assumptions and fundamental questions concerning communications policy in general and computer/communications policy in particular which the respondent believed must be addressed by means of a dialogue with the public.

The concerns of respondent (16) were very similar. They differed mainly in the tone in which they were presented, and in the singularity of purpose which clearly emerged from the comments. Respondent (16) was primarily interested in two issues: in the role that communications policies generally play in shaping our society; and in the proposed administrative and policy making structure for computer/

communications. Other issues were viewed as being subordinate to, and as an outgrowth of these.

Policy decisions with respect to computer/communications were seen to play a central role in the overall configuration of communications networks of all types. Hence, it was felt that these decisions, which would shape our society for years to come, should be made only after a range of alternatives had been thoroughly explored and discussed, either among the Canadian public or in the Cabinet and Parliament.

The respondent could not anticipate precisely what policies might emerge from these discussions, but believed it was likely that emphasis would be placed on (a) decentralization of decision-making, (b) the growing diversities of needs, and (c) cooperative arrangements implicit in Task Force recommendations. In particular it was felt that the proposed institutional arrangements would be a source for concern because they contained no way in which the broader social concerns of computer/communications policy could be addressed in a continuing way.

In order to facilitate these discussions, the respondent believed that the federal government should make available free Telex and long distance telephone services to a number of the 200 Community Information Centres. This action would greatly enhance the possibility of responsible and informed public participation in a dialogue about communications policy, and in the making of these policies. Unless this was done, many groups would be disenfranchised from decisions related to the most important set of public policy issues in the next few years.

Observation:

It seems clear that the overriding goal of both social institutions is to involve voluntary and citizen groups in participating in policy debate at the national level. To achieve this, communications networks

are viewed as the vehicles by which such involvement could be brought
about. Communications policy, therefore, holds the key to participation
in the formulation of all other policies. Thus, any form of communi-
cations policy taken on an added importance, in the view of these social
institutions. While they each have subsidiary goals, their main aim
is undoubtedly to facilitate a more broadly informed and participatory
public and parliamentary process.

Observation:

In view of these comments, which call into question the basic
approach of the Task Force, it is worthwhile recounting some of the points
of departure in order to place in perspective the more obvious differences
that exist.

First, the Task Force went to some lengths to try to uncover or devise
an appropriate framework within which it could view the issues and problems
of computer/communications. Chapter III of "Branching Out" describes
this process.

Second, the problems associated with public participation and access-
ibility to policy-making processes were recognized from the beginning.
It was in order to overcome these that contacts with the widest possible
variety of opinions were sought. Through invitations to submit briefs.
public meetings, discussions with associations, lecture sessions,
meetings with provincial government officials, the Task Force attempted
not only to engage in a dialogue with interested parties, but also to
determine which issues in computer/communications were of concern to
them. In general, the results of this approach corresponded to the
amount of interest shown. Where the interest was high, the response
was extremely useful.

Third, Task Force activities were very much concerned with the social aspects of computer/communications. This is attested to by the studies undertaken on its behalf, or with its funds, as follows:

a) the funding and commissioning of the Consumers' Association of Canada study "The Power to Communicate: a revolution in information sharing", which included the publishing of a second volume comprising a directory of community information centres in Canada;

b) the partial funding of an attitudinal survey of public attitudes towards computer technology by the Social Survey Research Centre. (This report was publicly discussed at the International Conference on Computer/Communications in Washington, D.C. in October, 1972 in a paper by T. McPhail);

c) the funding and commissioning of a study by M. Guité (M.I.T.) on "CATV Technology for Citizen Feedback to Government", and

d) the partial funding and manpower committed to the Task Force on Privacy and Computers, whose Report was published in December, 1972.

At least two of these studies were an attempt not merely to assess what the impact of computer/communications technology might be, but to try to establish how the technology might better serve Canadians in a direct way. In addition, the Task Force directed its own resources to an investigation of the status and trends of computer use in the health care field, in education, and in money transfers: fields having significant social implications. It also provided funds for a specific pilot project in the education field in Peel County, Ontario. These studies and investigations, for the most part, tended to emphasize the inconclusive nature of the use and impact of the technology where social aspects are concerned. Issues are not yet clearly defined, and

needs and benefits are not yet well specified. The conclusion that
further discussion, study, and experimentation was required, was
reflected in the statements and recommendations found in Chapter III
and in pages 152 to 156 of "Branching Out."

Finally, the Task Force was concerned with maintaining a Canadian
presence in computer/communications in the face of powerful influences
from the United States. A moratorium on government decisions and
actions in computer/communications at this time, could have serious
consequences for future Canadian participation in this burgeoning
field. Moreover, a further delay could diminish the amount of leverage
the government could apply in promoting any course of action, even that
proposed by the social institutions. For these reasons, the Task Force
saw the strengthening of Canadian developments, participation and
expertise to be a pressing requirement that should be addressed in the
near term. At the same time, the Task Force suggestions for institutional
arrangements, and particularly for a government focal point, were de-
signed to create an environment wherein the concerns of such respondents
as the social institutions could be dealt with in an appropriate, con-
sistent and continuing manner.

2   Reactions to Recommendations

2.1   Comments indicating general agreement with the recommendations and/or
        with the report as a whole.

        Users: None of the recommendations is in conflict with our own
                        objectives. We note the complementary nature and
                        interrelations between various recommendations and
                        would caution against revisions to any one of them
                        without consideration of the impact on all other
                        recommendations. (37)

                        We are in general agreement with the report. (12)

                        We are in general agreement with the bulk of the
                        functional recommendations of the Task Force. (31)

                        In general, the recommendations are good....there
                        are so many alternatives in this whole field that
                        laws of supply and demand are still legitimate ones
                        to observe. (33)

                        In reviewing the report of your Task Force today,
                        I was again impressed by its excellence. Naturally
                        I might not agree with some of the positions taken,
                        however, it certainly covered the opinions submitted
                        and presented them in a most readable fashion. (11)

        Services: In general, we are pleased to give a strong endorsement
                        to the recommendations. (32)

                        On the whole (our members) have found this to be a
                        most commendable report. (23)

        Equipment: This is an excellent report.... (42)

                        ...we are in basic agreement with most of the
                        recommendations of the report. (28)

                        We look forward to the early implementation of the
                        major recommendations which will enable the data
                        processing industry in Canada to become even
                        stronger than it is today. (25)

                        We think the report of the CCC/TF is of a very high
                        calibre and can be used as a working document for future
                        policy making in this area. (8)

                        We would like to commend the Task Force for the exceptional
                        quality of the Report. Seldom have task forces, committees,
                        commissions or other bodies undertaken such a difficult
                        task and/or produced such a comprehensive, well structured
                        and lucid report. (15)

(We) congratulate the CCC/TF on the excellence of its
report...the resulting recommendations are realistic,
maintaining an excellent balance between purely
nationalistic objectives on the one hand and long-
term practical realism on the other.   (7)

(We) would like to commend the Task Force for the
exceptional quality of the Report. Seldom has any
task force, commission or other body undertaken such
a comprehensive and difficult study and produced such
a thorough and well-written report. (4)

Carriers: Our overall impression of this Report is most favourable...
It should....provide a sound basis for guiding the
direction of government policy and subsequent legislative
action.   (45)

The central theme of the report....has received substantial
approval among our members.   (3)

We welcome this publication, and in general are in
support of the recommendations.   (5)

The contents of the report will surely serve Canadians
for many years as a foundation and reference point in
the rapid evolution of computer communications services....
the central theme of the report....will lead to the
maximum benefits to the greatest number of Canadians....(40)

....the Task Force has done a commendable job in carrying
out its assignment and its report is a well researched
document. While some issues will be contested, we
feel that the main thrust of the report is acceptable. (17)

...we are generally in agreement with the recommendations...
although the external telecommunications environment has
not been completely assessed. (13)

Misc: We applaud the theme and direction of the report.   The
39 recommendations provide a fair basis for the
development of needed legislation. (19)

Our committees can do nothing but commend this very
informative report almost in its entirety. (46)

In general, we concur in the recommendations...on
the thoroughness of the approach and the progressive
nature of the conclusions reached. (47)

As a general comment, we hope that the Government
will consider and act on the report in total.   (51)

> The Task Force report...is an exceptionally well
> written document...with a few exceptions, most of
> the recommendations are acceptable to and will be
> supported by us.   (27)
>
> In general, this Association is in agreement with
> the recommendations of the report and with section
> B3 covering Canada's health care delivery system. (6)
>
> The study group is in agreement with much of the
> philosophy proposed by the CCC/TF for development
> of the computer/communications industry in Canada. (53)

2   Comments indicating general disagreement or which express
     reservations with the report as a whole.

Misc: See point 3.1.3 under concepts.   (21) (16)

> In time, any individual may be able to access the
> world's technology for his own personal development
> and use...the possibility of any person being able
> to use the computer in this way has sometimes been
> overlooked by planners...However, in the report...
> there seems to be relatively little weight given
> to this priority.   (9)
>
> ...the report is quite comprehensive, but the recommendations
> do not flow directly from the material presented...
> Canadians have in the past consistently implemented
> measures judged in the long range national interest,
> without regard to short range minimal cost...the
> report...recommends action which would tend to create
> a monopoly situation and minimize market competition
> ....Evolution is not good enough...the computer/
> communications network will be too central to the
> democratic process not to be placed under the more
> immediate control of our elected representatives. (18)

Equipment: ...I sincerely hope that the Minister will reject the
> report as a basis for formulating an industrial policy
> for the computer industry in Canada. While the Task
> Force has done an excellent job of assessing the
> current state of Canadian Industry in this field,
> they have failed rather badly in coming to grips with
> what can be done to create a domestic computer
> capability in Canada.(26)

Observation:

If it is possible to strike a balance between those respondents
who have expressed general agreement with the main thrust of the report.
and those who have expressed opposition or reservations, the ratio in
favour in in the order of 6:1. While this cannot be regarded as an
exact quantitative assessment, it is an indication of the overall
disposition of respondents who have been concerned enough to comment
in writing on the main thrust of the report.

2.3   Reactions to General Recommendations R1-4

RECOMMENDATION 1:

Computer/communications (i.e., computer services by
remote access through communications facilities),
should be recognized by governments as a key area
of industrial and social activity, and steps should
be taken towards strengthening of the Canadian
industry in this field, and co-ordination of its
development to the benefit of Canadian society.

RECOMMENDATION 2:

The federal government should take specific measures,
as outlined throughout this report, to promote a
high degree of co-operation between public and
private sectors in the development and execution of
policies for computer/communications in Canada.

RECOMMENDATION 3:

In the formulation of national computer/communications
policy a unified approach throughout Canada should be
stressed as a key factor requiring close co-ordination
between federal and provincial actions.

RECOMMENDATION 4:

In the area of federal responsibilities a Focal Point
should be established within the Government for co-
ordination in the development, formulation and
continuing evaluation of national policy in all matters
pertaining to the field of computer communications.

Organizations indicating support for all four general recommendations:

 Users: 1, 38

 Services: 2, 30

 Carriers: 13

Organizations indicating support for particular recommendations:

 Users: 33 (Rec 4); 34 (Rec 2).

 Services: 32 (Recs 1 and 4).

 Equipment: 7 (Rec 1); 8(Recs 2 and 3).

 Carriers: 3 (Recs 1 and 3); 5 (Recs 1 and 3); 17 (Recs 1, 2 and 3); 45 (Recs. 1, 2 and 3).

 Misc: 27 (Rec 1).

Criticisms or reservations concerning general recommendations:

 Users: Government involvement, both Federal and Provincial, should extend only to the coordination of government agency requirements, together with a monitoring capability. The monitoring could be best achieved through periodic conferences with users. (49)

 Equipment: The multi-faceted response needed from governments is so immense that it is doubtful if adequate, timely responses will be forthcoming. Current Federal/ Provincial relations in communications and other areas are not a source for optimism. Further, the desired understanding between government and the private sector is proving slow to materialize despite frequent enunciations. (7)

 Carriers: The taking of specific measures (R 2) and the execution of policies should be evolutionary, with industry participation. The Focal Point (R 4) should be more clearly defined and should not be allowed to assume regulatory functions. (3)

    The establishment of a Focal Point (R 4) is desirable but there is concern that the roles set out for it impinge upon normal business activities. (45)

    Certain responsibilities of the Focal Point (R 4) make it seem that Government could assume some operational and planning roles of carriers. The

Focal Point's prime work should comprise the
development of national goals; in which the carriers
could assist in their testing and definition. We
are concerned because of constitutional problems,
particularly in the reconciliation of national
objectives and regional aims. We detect a theme
of extending regulatory jurisdiction into areas of
management. (55)

We are impressed with the idenfication and communication
of national goals. This is better than for government
to set up new agencies to research, plan and regulate
industry, but the goals identified by the Task Force
are rather explicit and detailed. (54)

We would be opposed to any action on the Focal Point's
part that would interfere with the prerogatives of
management, i.e., the allocation of capital funds,
the setting of rates, etc. (17)

Misc: Based upon the general record of government in
Canada, we question whether deep government involvement
will, in fact, foster innovation, development, and
self-reliance of the industry. When policy is
centrally established, "central control" and
"rational" policies result in the denial of effective
and modern facilities in the Provinces. While
agreeing to a unified approach, we insist that
regional considerations be recognized. (27)

Observation:

The reservations concerning the general recommendations centre

upon increased Government involvement. Users and equipment suppliers

indicate that, on the basis of Government involvement to date, they

are not optimistic about the potential results of future Government

involvement. The carriers are concerned that increased Government

involvement will encroach upon what they consider to be the

prerogatives of management. It is significant, however, that one

carrier (17) has noted "...to the extent that the focal Point

can demonstrate deficiences in meeting user needs, can coordinate

the activities of industry, and can generate an improved environment

for the growth of computer/communications, the efforts of the Focal

Point would be appreciated." On the whole, there seems to be

fairly widespread support for the general recommendations, with some

reservations concerning the specific actions that are envisaged.

.4 <u>Reactions to Data Processing Services Recommendations R5-9</u>

RECOMMENDATION 5:

> No restrictions should be imposed on the entry of
> any organization into the commercial data processing
> business, unless such entry would lead to anti-
> competitive practices, not remediable under the
> general laws relating to competition in Canada.

<u>Organizations indicating support for this recommendation:</u>

Users: 38, 33.

Services: 30.

Equipment: 28, 8.

Carriers: 45, 3, 5, 17, 13.

Misc: 27, 53.

<u>Specific Comments:</u>

Users: Agreed, except for common carriers and banks. (1)

Services: Generally agreed, but requires monitoring for cases
like the Canada Systems Group, IBM, etc. (2)

RECOMMENDATION 6:

> Federal legislation should be introduced which
> might serve as a model for parallel provincial
> action, empowering the federal regulatory body
> responsible for the regulation of telecommunications
> carrier organizations to impose conditions on the
> entry of telecommunications carriers into the
> business of offering data processing services
> commercially.

<u>Organizations indicating support for this recommendation:</u>

Users: 38, 1, 33

Services: 2, 30

Equipment: 8

Carriers: 45, 17, 13.

Specific comments:

Users: We are concerned about the possibility of the
dilution of carrier resources by their undertaking
of commercial data processing. These resources
are needed for the improvement of the Canadian
computer/communications network, and this possibility
of dilution has not been addressed. (37)

Carrier participation in commercial data processing
should not be allowed to dilute their prime respon-
sibilities. (31)

It would be better to direct carrier resources at
improving network capabilities on an east-west basis. (49)

Services: It must be ensured that diversification into data
processing does not jeopardize the carriers' prime
responsibility, i.e. the quality and availability
of efficient, low-cost digital communications
facilities. (24)

Equipment: The provision of data processing services should not
adversly affect the carriers' responsibilities to
provide telecommunication services. (4)

Carriers: We particularly endorse the Report's proposal that
carriers be permitted to enter the data processing
field with a minimum of restriction. (29)

We believe that it is vital to have compatible federal
and provincial legislation in this important area, and
that the related powers given to any regulatory body
be precisely defined in the legislation. (3)

We appreciate that there is a need for compatible
federal and provincial actions but believe that the
economic and social differences between different
regions in Canada may call for some different approaches
by governments in the area of computer/communications
policy. (54)

Misc: Whether the carriers should be allowed into the data
processing business with or without horizontal or
vertical integration is a central issue. Science
Council Report No. 13 pointed out that there is just
no way of preventing the carriers from taking
advantage of their position. (18)

> This recommendation appears to be somewhat redundant
> and contradictory to Recommendation No. 5. In (our
> opinion), present provincial legislation is adequate
> to ensure that actions of Provincial utilities are in
> the best interests of the public. (27)

Observation:

There appears to have been a change in emphasis on the part
of other organizations concerning carrier entry into the commercial
data processing field. Whereas most computer services companies and
some equipment suppliers were adamantly opposed a short time ago,
they now seem to have accepted this possibility as inevitable.
Perhaps two reasons are apparent: first, the entry of certain
provincial Telcos into the field may have lessened their optimism
of prohibiting carrier entry; and second, the record of Computer
Sciences of Canada (CN-CP Tel 51%) over the last two years, during
which it has failed to 'corner the market', may have had some
influence in leading those other organizations to believe that the
effects of carrier participation may have been overrated. This is
not to suggest that carrier entry is now welcomed by other participants
but rather that the emphasis has now shifted from outright opposition
to a widespread expression of concern at the prospect of carriers
paying even less attention in the future to their prime responsibilities,
particulary in view of the serious questions raised concerning the
carriers' present capabilities.

A number of comments appear to suggest that the Task Force has
been swayed by the size of organizations and their "Canadianness".
The greater these factors are, the more likely it is that they have
been regarded as instruments of national policy, according to this

allegation. For example, one equipment supplier (8), suggests that
the report advocates "...the use of large economic units (e.g. common
carriers, banks, etc.) to get the industry going at a pace and in a
direction which will best serve Canadian interests." Similarly,
one association (49) states "Monopolistic supplier positions tend
to thwart timely innovative developments and monopolistic or
instant bigness positions should not be legislatively endorsed."
Thus, it appears that recommendations 5, 6, 7 and 8 have been
interpreted by some as open invitations for the carriers and the
banks particularly, to enter the data processing field with all
possible speed. This is not the case. The fact is that any
organization is at liberty to enter the field at present, and the
recommendations referred to are designed to prescribe the conditions
under which carriers and banks may enter.

RECOMMENDATION 7:

> Telecommunications carriers wishing to offer data
> processing services commercially in Canada may do so
> only under the following conditions:
>
> (i)   That such services be offered by a separate
>   affiliate, with officers, staff, equipment
>   and computer facilities distinct from those
>   of the carrier;
>
> (ii) that all communications or other services
>   provided to the affiliate by the related
>   carrier must be tariffed and made available
>   on a non-discriminatory basis to any other
>   customer;
>
> (iii) that the carrier may obtain data processing
>   services from outside sources (including its
>   data processing affiliate) save for those
>   communications-oriented computer services
>   which, in the opinion of the regulatory body,

are integral to the operation of the
network should be provided by carrier
in-house facilities designed exclusively
for the public service obligations of the
carriers;

(iv)   that the carrier may purchase data processing
services from its data processing affiliate,
but that if it chooses to do so, it must
carefully separate and identify such services,
and file information as to their precise
nature and cost for public inspection by the
regulatory body; such costs and all transfer
payments from the carrier to its affiliate
of vice versa would be subject to regulatory
scrutiny and review;

(v)   that except for the restriction in paragraph
(iv) above, all data processing services
offered by the affiliate would be unregulated.

Organizations indicating support for this recommendation:

Users: 1, 33, 38

Services: 2

Equipment: 8, 25.

Carriers: 13

Specific Comments:

Users: Subsidization of carrier affiliates would be difficult
             to police, and a preferred position could develop. (49)

Services: A carrier should not be able to use the services of its
             affiliate. It is well-nigh impossible to separate
             costs. (32)

             Recommendation 7 would allow Bell Canada such a base
             workload that it would result in the lowest processing
             unit cost in Canada. It is therefore doubtful if Rec.
             7 (iv) is justified. And however effective Bell
             Canada would be, it would certainly discourage investors
             from supporting the current nucleus of service companies.
             (43)

             The law must ensure the security of information provided
             by us to the carrier which must not be passed to carrier's
             affiliate. The sale of services by the affiliate to the
             carrier should be prohibited. (24)

A carrier arms-length subsidiary should be restrained from using the parent-company name, symbol, logo or trade-mark. Consideration should be given to prohibiting the carrier from purchasing services from the subsidiary. <u>Before</u> carriers are allowed in, ground rules must be laid down and understood by all. The carriers and the regulatory body must agree on the records of the subsidiary and how they should be maintained. (30)

Equipment: The affiliate must be required to maintain separate accounts and identify joint costs. (25)

There should be no carrier entry allowed unless they contract out all their data processing requirements (own, plus corporate parents') to third parties. There have been serious cases of information misuse by carriers, and diversion of resources. The base workload case is unjustified. It is impossible to ensure comparable pricing because of the many pricing algorithoms in existence. Full arms-length separation is impossible unless they are forced to contract out their own workload as a condition of entry. (15)

Carriers should be required to maintain and identify joint costs between itself and a subsidiary. (4)

Carriers: The degree of separation required is untenable to many carriers. (29)

Recommendation 7 (iii) needs appropriate guidelines to differentiate between services that are integral to the carriers operations and those which are not. (45)

The concept of a separate subsidiary is acceptable, but an arms-length arrangement is wasteful and un-workable, particularly for small carriers. Other services (R 7 ii) requires definition. There should be no exposure of costs (R 7 iv) for public inspection. (3)

For small companies, this would be an unworkable arrangement prohibited by cost and availability of skilled manpower. (5)

It is not necessary for an arms-length subsidiary to be established provided proper accounting is maintained. We agree that carriers should not discriminate between users; however, in specific and unusual conditions, it may be necessary to cross-subsidize between tele-communications services and computer services to meet social and regional developments which cannot other-wise be met. (22)

The arms-length restriction proposed between parent
and subsidiary could seriously impede fast, innovative
response to service demands. (55)

Although (a separate affiliate is) discriminatory,
since the restriction does not apply to all industries,
it may be acceptable where data processing markets are
large. However, it may be unviable elsewhere, thus the
demands may be met from central Canada. (54)

Misc: ...there is just no way of preventing the carriers from
taking advantage of their position in the operation
of communication lines in giving an unfair advantage
to their own data processing over organizations who
would operate in competition....To make it even easier
for the common carriers to establish a monopoly position
Rec 7 (iv) allows the common carriers to purchase data
processing from their affiliate. It is this single
recommendation which troubles me the most. (18)

The arms-length concept may be desirable at some future
time, after the necessary growth has occurred. (27)

We approve of the entry of telecommunications carriers
into the commercial data processing service business
under terms that would create a truly competitive
environment, and therefore subject to conditions which
would prevent unfair subsidization by the carriers of
the costs of their commercial data processing services.
(53)

Observation:

   As noted previously, the acknowledgement of inevitability of carrier

entry appears to be evident from the comments of non-carriers. They

are now concerned much more with the restrictions that should be

imposed. The gap between what is acceptable to them, and what is

acceptable to the carriers is still wide. The chief concerns of

respondents other than carriers are: (1) that the affiliate should

not be entitled to process the base workload of the parent; (2) that

cost allocations would be impossible to police; (3) that information

given to the carrier for communications requirments will be passed

to the servicec company's competitor -- the carrier affiliate;

(4) that the carrier will attempt to have the affiliate identified with the parent as closely as possible; and (5) that market funding for independent service companies will be impossible to obtain after the entry of the carriers.

The carriers, for their part, lean heavily on regional considerations, and even cross-subsidization between affiliate and parent is regarded as a beneficial objective in certain circumstances. The recommendation, subject to more precise definitions, appears to be fairly acceptable to two major carriers.

RECOMMENDATION 8:

Chartered banks should be permitted to offer data processing services to the general public in Canada, subject to the following conditions:

(i) that such service should be directly related to the business of banking; and

(ii) that the Bank Act be amended to provide the mechanism whereby interested persons may obtain rulings, from the Inspector-General of Banks for the administrations of the Act as to whether any particular service is within or outside the meaning of (i) above, and that the banks would be bound by such rulings.

Organizations indicating support for Recommendation 8:

Users: 33, 34.

Services: 2.

Equipment: 8.

Carriers: 3, 13, 17, 45.

Specific Comments:

Users: Consideration should be given to allowing banks to offer data processing services under constraints similar to those in Recommendation 7. (37)

Agreed, but legislation must be specific to prevent
banks from using powers in pricing, or forcing customers
to use their data processing services. They could also
refuse credit to entrants into the data processing
business. (1)

Restricting banks to related services seems reasonable
but there could be problems of definition. (10)

In the next revision of the Bank Act, the business of
banking should be defined more specifically. Data
processing services should be limited to the respective
reporting functions of banks. Rulings of the Inspector-
General of Banks should be subject to the approval of
the Federal Focal Point, as well as for other financial
institutions. (34)

Services: There is no evidence or valid support to restrict banks.
If any restrictions were necessary, they would apply
equally to Trust Co., Credit Unions, finance houses,
and commercial lending companies. They all represent
alternative sources of credit.

Banks should be compelled to segregate costs, and be
discouraged from offering loss-leader services. (32)

Recommendation 8 seems wholly inconsistant with emphasis
elsewhere on free competition. It assumes a certainty
about the business of banking which does not exist.
Only those organizations chartered under the Bank
Act may call themselves banks. The lack of definition
places the Inspector-General of Banks in an impossible
position. Banks were intended to be subject to the
competition act. There is no reason why Recommendation
5 would not cover banks, which should, in fact, be
encouraged to offer data processing services. (23)

The Bank Act should be modified to more closely
prescribe commercial data processing activities. (24)

We are very concerned about the instrusion of the banks
into data processing services, particularly in view
of the situation in the United States. (39)

Recommendation 8 is our greatest concern. Arms-length
relationships should be considered. The banks' activities
must be more closely prescribed. (30)

Equipment: This recommendation is too loosely defined. Some means
must be devised to positively prohibit the tie-in of
data processing services by a bank to its other banking
functions, even prohibiting the acceptance of data
processing business from customers who are indebted to
the bank or do other types of business with it. (15)

Carriers: It may be necessary to restrict banks in the data
              processing field because of the difficulty of policing
              fair competition. (5)

Misc: The business of banking is difficult to define, and it
              would be unfortunate if this restricted futher development.
              Given the present state of development, benefits would
              arise from the participation of banks in public data
              processing and should be encouraged. (27)

              The results of limiting or not limiting service to that
              "directly related to the business of banking" are not
              presented in sufficient detail in the report to allow
              us to comment on its merit. Accordingly, to remove
              these doubts and create a healthy and competitive
              climate for the provision of data processing services
              commercially, we feel that the predicted results of
              restricting, or alternatively not restricting, the data
              processing services which chartered banks may offer to
              the public should be presented in sufficient detail
              to permit rational evaluation of the alternatives. If
              it becomes clear that restriction is necessary, the
              data processing services which chartered banks can
              offer should be explicitly defined. Banks should be
              subject to at least the same limitation as carriers,
              prohibiting unfair subsidization of the cost of their
              data processing business. This restriction should also
              apply to other protected corporations, e.g. trust and
              loan companies, universities. (53)

Observations:

    The opposition to this recommendation arises mainly from the

participants most directly concerned, although a number of users

recognize the powers that banks could bring to bear, if they actively

and consistently promote their commercial data processing services.

On the one hand, the banks see no reason for limiting their scope,

particularly in view of the fact that 'near-banks' have not been

similarly proscribed. On the other hand, the independent service

companies now view the banks as their most dangerous potential

competitors, and they point to developments in the U.S. where the

banks account for one-third of total market revenues. Those companies

which provide payroll, accounting, and possibly inventory control

services are particularly desirous of seeing banks more closely proscribed.

As stated in <u>Branching Out</u>, the Task Force "...does not underestimate the difficulty of defining precisely which services fall within the terms of the Act...." It recognized, therefore, that further work was required before more specific guidelines could be contemplated.

RECOMMENDATION 9:

> Universities, in the consideration of providing
> commercial data processing services to outside
> customers, should be strongly discouraged from
> taking advantage of their privileged position
> (which arises from their publicly-supported
> operating budgets, tax exemptions and grants),
> in areas where services are available from other
> sources. However this policy should be sufficiently
> flexible to allow universities to employ excess
> capacity (over and above their primary teaching
> and research commitments) in special cases where
> commercial operations from outside sources are
> not filling the need.

<u>Organizations indicating support for this recommendation</u>:

Services: 32

Equipment: 8

Carriers: 3, 13, 17, 45

<u>Specific Comments</u>:

Users: Complete disagreement. In no way should Universities
            be allowed to provide any outside services for sale
            from their privileged position. (1)

            Unfortunately, computer specialists engaged in
            education sometimes feel it is their duty to
            install the largest, fastest and most versatile
            machine on the market. The policy should be
            designed to restrain this enthusiasm for one-
            upmanship. (38)

We share the Task Force's uncertainty about the proper action in this case. (33)

Services: May be difficult to control. However, the concept is correct. Probably it needs an enforcement mechanism. (32)

Universities should be unconditionally prohibited from providing commercial data processing services. (24)

This recommendation is the weakest because there is a principle at stake. The policy should not be flexible but rigid. If the universities do not abide by this recommendation, then grants, tax-free status, and duty-free entry of equipment should be withdrawn or denied. (30)

Carriers: We question if it is possible to ensure fair competition from universities. Because of this, it may be necessary to bar them from commercial data processing. (5)

Universities could preempt markets to such an extent that future entrepreneurial entry would be discouraged. (55)

Recommendation 9 should be extended to cover all government-supported non-profit institutions. (13)

Misc: Recommendation 9 is given too much emphasis in the report. After all "only about 1.5%" of the commercial service bureau market is being served by universities, and this is probably due more to compelling local conditions than to a general strategy on the part of the universities to compete unfairly. (35)

Arguments favouring participation by the carriers and the banks in an underdeveloped area also favour participation by the universities. They often have a degree of sophistication and expertise which should be made available to the community at large. We agree that a flexible policy which would allow universities to employ excess capacity is desirable. (27)

Observation:

Most of the opposition to University participation now resides with the independent service bureaux, but surprisingly strong opposition has also been expressed by other respondents. The bureaux appear to have accepted for the most part the impression that university commercial computing revenues are not large, but they are particularly concerned about certain specific locations where university service revenues are

disproportionately high (e.g. Montreal). However, their attack is now focussed mainly on the principle involved. Other fragments of information suggest that Task Force enquiries into this area may have had a sobering effect upon universities, and the realization of the magnitude of criticism against their commercial endeavours seems to have brought about at least a pause, if not retrenchment in the extension of their services.

.2.5   <u>Reactions to Data Communications Services Recommendation R10-21</u>

RECOMMENDATION 10:

Policies in network development should be oriented
in consultation and co-operation with the provinces
and the private sector towards achieving rates for
specific services in which the controlling factors
may include time, bit rates or other parameters of
network utilization but in which geographical
distance is of minor or no influence, particularly
within regional zones.

<u>Organizations indicating support for this recommendation</u>:

Users: 1, 34, 38

Services: 2, 30

Equipment: 8, 28

Carriers: 13, 45

Misc: 27

<u>Specific Comments</u>:

Users: There are potential dangers to this recommendation and
             it requires further review by the Focal Point. It
             could encourage the uneconomic location of facilities
             and could penalize short distance users. (33)

             We support recommendation 10, but the Regulatory Body
             should pursue time-based rates as a way of increasing
             network efficiency, and of lowering constant dollar
             unity transmission costs. However, time-based rates
             should not be established at the expense of intra-
             city traffic. (34)

             Generally, telecommunications rate structures should be
             cost-oriented and should not subsidize costs of groups
             where concentration of use is low and the undue expense
             of groups where concentration of use is high. (31)

Carriers: We agree. We recognize that distance is becoming less
             important as a parameter in rate-making. Our tariffs
             will continue to move in this direction. (45)

             While geographical distance may be less of an influence
             in the future, it is not possible to commit ourselves
             to a rate policy that does not recognize the needs of
             the market, nor the existing regulatory environment
             as it pertains to all telecommunications services. (3)

The case made in the text dispenses with the need
for distance-independent rates, and agrees with our
assessment of the situation. We believe the recom-
mendation contradicts the text. (55)

In our view rates must bear some relation to cost
and demand. Inasmuch as relative costs of transmission
and terminal equipment are placing a reduced emphasis
on distance as a factor, tariffs will tend to approach
the basis of the recommendation. (17)

The principle is already in effect since, with few
exceptions our customers pay the same rate for public
service to any given destination regardless of the
point of origin in Canada. (13)

Misc: If the words 'specific services' mean 'certain
special services' we are in accord with the recomm-
endation. We are not of the opinion that distance
should cease to be a factor in all service pricing....
It is important that a balance be struck between
the need to achieve cost reductions in computer
processing and the need to avoid computer central-
ization which would have a serious negative impact
on the outlying regions of the country. (27)

Observation:

It is apparent that some respondents have not read or have

mis-read the text and recommendation 10. The intent of this

recommendation was centred upon 'specific services', which might

equally be termed 'certain special services', and two or three

examples were quoted in the text.

RECOMMENDATION 11:

Government should take steps through the Focal
Point, in consultation and co-operation with the
provinces, to ensure the evolution of data comm-
unications networks which in part are functionally
separate from the telephone network, with the aim
of having improved technical and economic service
characteristics provided.

Organizations indicating support for this recommendation:

Users: 1, 38

Services: 2

Equipment: 4, 8, 28

Carriers: 3, 5, 13, 17, 45, 55

Specific Comments:

Services: The development of unique data networks should not
be done at the expense of lower costs of present
services. (30)

Carriers: While we endorse this recommendation.....the report
fails to recognize that the use of digital modulation
over analog transmission systems can give very
satisfactory and economical performance, and that
by a suitable trading of signal-to-noise ratio
versus bandwidth, virtually error-free transmission
can be achieved over digital/analog systems. Such
important developments as Data Under Voice (DUV)
will enable existing microwave systems to carry
additional data tranffic at low cost and with a
very low error rate. (3)

We question if it is feasible to entirely separate
data and voice communications and deal with data in
isolation without considering the effect on the total
integrated telecommunications utility. (22)

Misc: Evolution is not good enough, nor do I think that the
common carriers, in view of their present large invest-
ment in voice networks can be asked, or for that matter,
expected to develop a data network sufficiently rapidly
to serve the needs of Canada. (18)

If 'technical and economic service characteristics'
can, in fact, be improved by functionally separate
networks, we would favour this sort of evolution.
However, if the potential economic improvement merely
arises from the methods of bookkeeping, a simple
solution might be found in different accounting methods. (27)

Observation:

The Task Force went to some lengths to dispel the idea that a

physically-separate digital data transmission network was an urgent

requirement for Canada in the foreseeable future. Recommendation 19

in fact, endorsed the carriers' plans as the present viable direction

for the development of data communication facilities. Among the

comments of one respondent (18) appears the statement that "A study

for the Telecommission indicated that this unused capacity across Canada on most of our communication channels is as high as 80% and occasionally higher." This large unused capacity was one of the reasons which led the Task Force to conclude that additional transmission facilities were not the answer.

This recognition of sufficient capacity was complemented by the desire to encourage the use of existing facilities to the greatest possible extent. The Task Force fully recognized that "...the use of digital modulation over analog transmission systems can give very satisfactory and economical performance..." (3), but the problem however, was how to ensure that these low costs and reliability would be passed on to the users. Towards this end, the Task Force considered that this could not be achieved unless a functional separation, particularly with regard to switching functions, from the telephone and public message networks was acknowledged by the carriers.

RECOMMENDATION 12:

> A non-carrier organization leasing facilities from a carrier should be permitted to attach to those facilities any data communication equipment not owned by carriers, provided only that it meets published standards for continued protection of the carriers' networks from damage and interference; such an organization should, however, be encouraged to adopt published data network standards wherever possible.

Organizations indicating support for this recommendation:

Users: 1, 34, 37, 38

Services: 2, 30

Equipment: 4, 8, 25, 28

Carriers: 13, 17, 45

Misc: 53

Specific Comments:

Users: Increased use of existing networks by a broader clientele
              would also be promoted by more liberal policies permitting
              interconnection of user-owned and provided equipment
              (such as terminals, multiplexers, concentrators) to
              the carriers' networks. (31)

              Our industry supports this recommendation heartily...
              because we have special needs....the present cost of
              rented terminals is wasteful, because it provides for
              more maintenance than is usually required. (34)

Equipment: It is important that freedom for non-carrier attachment
              as outlined apply to all facilities of the telecomm-
              unications carriers including public switched networks. (28)

              Greater liberalization of carrier policies concerning
              user-supplied attachments to telecommunications facilities
              will permit greater competition to provide services and
              consequently result in costs lower than under present
              regulations. (25)

              Carriers should be required to publish as early as
              possible any specifications relating to the interconnection
              of new types of digital data sets in order that we may
              compete with the privileged carrier-related manufacturers,
              otherwise a monopoly would arise. The technology we have
              developed is as good as, or better than any in North
              America. Continued success depends upon access to
              carrier lines, and in particular knowing detailed
              future specifications re: signals and interfacing. (50)

Carriers: We agree. Indeed it is our practice to allow our
              subscribers, at their request, to attach their own
              terminal equipment to leased networks. (45)

              We agree, provided that the common carriers are not
              restricted in their pricing to the extent that they
              cannot compete, and also with the understanding that
              we are talking about terminal equipment only. Emphasis
              should be placed on 'continued protection' of carrier
              networks. (3)

              All interconnected data equipment should be attached
              through a carrier-owned interface, even though it may
              meet the published specifications for damage and inter-
              ference. This is desirable in order to accomodate

future technological change to the network as well
as network protection. We also believe all devices
which provide multiplexing in any form should be
carrier-owned because they are intimately associated
with the internal network. (5)

It is impossible to predict the impact of future
technological development on today's equipment.
Will the carriers be forced to supply and maintain
conversion equipment to hook up every type of
existing customer-owned terminal equipment as new
switching equipment is put into service? Or worse,
will the existence of customer-owned terminal equipment
inhibit the introduction of new transmission and
switching systems and hence slow the pace of
modernization? (55)

Misc: We approve of the liberalization to be granted non-
carrier organizations with respect to the connection
of non-carrier attachments, subject to adequate safe-
guards for the carriers' facilities. (53)

Observation:

While there is widespread support for this recommendation from

various users and equipment suppliers, the carriers' support is

limited. They confine their agreement to 'terminal equipment',

which for some carriers does not appear to include multiplexers,

concentrators and perhaps modems. There is also concern on the

part of certain users and suppliers that this recommendation is

restricted to facilities other than those utilized for the public

switched networks.

RECOMMENDATION 13:

A non-carrier organization (including data processing
affiliates of carriers) may offer commercial data
communication services to customers through carrier
facilities, subject to filing with the regulatory body
prior to initiation of service, information on its
corporate structure and its data communication services;
and the regulatory body should be empowered to conduct
hearings which may result in the services being dis-
allowed on the grounds of failure to comply technically
with published network specifications and standards,
or of economic infringement of the common carriers'
regulated public switched-network services.

Organizations indicating support for this recommendation:

Users: 1, 37, 38

Services: 2, 30

Equipment: 4, 8, 28

Misc: 53

Specific Comments:

Users: This is perhaps the most relevant recommendation
              in 'Branching Out' for our industry. We support
              this recommendation because....it would allow the
              extension of circuits from coast to coast that is
              economically impossible now.....it will allow the
              provision of full services in many more of the smaller
              centres than is now practical....   (34)

              Non-carrier organizations should be permitted to
              provide communications facilities for their own
              in-house use, or for resale, provided they meet
              or exceed comparable carrier-published facility
              specifications. (49)

Services: Insofar as the provision of data communication
              service is concerned, we recommend that non-carrier
              organizations be permitted not only to interconnect
              data communications equipment, but also to provide
              communications facilities. We are also concerned
              that the report fails to address the situation where
              a non-carrier organization provides its own comm-
              unications facilities at advantageous cost. (24)

              We support Recommendation 13 but are not sure that
              we fully understand what is meant by 'economic
              infringement'. A further amplification and
              explanation would be necessary in developing the
              necessary data network standards prior to filing
              with the regulatory body. (30)

Carriers: Serious concern is felt regarding this recommendation.
              if it is intended that any non-carrier organization
              could, using carrier facilities, offer a variety of
              data services to the public, we would be concerned
              that such a policy would not be in the public interest
              as it would lead inevitably, to serious economic
              infringement of the carriers 'regulated public
              switched-network' services. (29)

              If the principle of price-averaging is to be preserved,
              as we think it should, the government must ensure that

'cream skimming' is prevented and that the economic
viability of the regulated carriers is maintained....
However, we do recognize the legitimate demand of
certain d.p. organizations for the right to lease
networks for combined data communications and d.p.
services in a single package which may be offered
to their customers at all-inclusive rates. Resale
of this type and under certain specified conditions
(q.v.) is about as far as we are prepared to go. (45)

We would have considerable concern with any suggested
policy advocating general line sharing and resale.
However, we do recognize the need for continuing
examination of this whole matter in terms of the
technical aspects involved and the underlying rating
principles which have been accepted to date in the
establishment of telecommunications tariffs. (3)

We believe no resale of carrier services should be
allowed, as it will invariably result in cream-
skimming. With the almost complete interchangeable
nature of data and voice, it would be impossible to
contain the resale to data services only. This
would eventually lead to erosion of the public
switched voice network. (5)

Allowing non-carriers to 'resell' communications
services can have serious long-term damaging
effects on our utility responsibility. (22)

Strict guidelines on 'line share' and 're-sale' must
first be established in consultation with the
carriers to establish workable arrangements. These
guidelines would then form the basis for regulatory
judgment on matters of economic infringement,
technical compliance, etc. (55)

We oppose this recommendation.....We feel that this
would unduly jeopardize the commercial position of
existing carriers. (17)

We are not certain that economic infringement, however
defined, could be demonstrated and proven to the
regulatory body before the public services offered by
a carrier were adversely affected. (13)

Observation:

Some user and service suppliers feel that recommendation 13 does

not go far enough, and they wish to have the opportunity of providing

their own communications facilities if it is advantageous to do so.

The carriers express concern at any policy of general line-sharing and resale, but recognize the need for further examination of the matter. One major carrier appears to accept implicitly the principle involved in the recommendation, but believes that strict guidelines must first be established. Some other carriers are prepared to accept the principle of non-carriers being allowed to offer combined computer/ communications services, on the understanding that these can be readily identified and differentiated from other services.

RECOMMENDATION 14:

> Carriers should be required by legislation to file
> with the appropriate telecommunications regulatory
> body, specifications and charges for data commun-
> ication services; and the regulatory body should be
> empowered to approve such specifications and charges;
> and to require publication of them.

Organizations indicating support for this recommendation:

Users: 1, 34, 38

Services: 30

Equipment: 8, 28

Carriers: 3, 13.

Specific Comments:

Users: The Focal Point should be responsible for the filed
            information and the submissions should be published
            so each user may be sure that he is making the most
            efficient use of the available facilities.   (34)

Services: A clear, concise, and enforceable statement of
            liability of the computer/communication carriers
            function and responsibility should be mandatory.
            We have suffered from both line and computer failure.
            We have had to go to considerable trouble to establish
            a claim for credits, resubmit our lost data and incur
            heavy duplicate expenses. The monitoring of transmission
            line standards, computer access failures, etc., appear
            to be non-existent. At present there is little or no
            liability by the carrier or the time-sharing computer
            for lost user data. (2)

Carriers: We agree with this recommendation, but question the
need for publishing specifications when an interface
is always provided. There is a social danger inherent
in wide publication of network specifications, as it
facilitates the construction of "Blue Boxes" and
network sabotage. (5)

We agree provided the services are not competitive.
Competitive services should not be regulated. (55)

RECOMMENDATION 15

The telecommunications regulatory body should be
empowered to enforce adherence by the telecommunication
carriers to prescribe procedures in the establishment
of their data communication rates.

Organizations indicating support for this recommendation:

Users: 1, 38

Services: 30

Equipment: 8, 28

Carriers: 5

Specific Comments:

Services: The regulatory body must have a firmly established
rate setting philosophy before it begins negotiations
with carriers. (30)

Carriers: We should disagree with this recommendation if it is
intended that the regulatory body should be empowered
to prescribe the basis on which a data communications or
other telecommunications rate is to be established by
the carrier. However, we agree with the implication
in the preceding narrative. (3)

Accounting rates for international settlement of pay-
ments are decided through bilaterial negotiation. This
fact should be noted in defining the prescribed procedures
for establishing collection rates which the end user
must pay. (13)

RECOMMENDATION 16:

Government, through the Focal Point, should request
organizations offering data communication services
to effect interconnections between their systems as
needed for the development of a coherent data comm-
unications network.

Organizations indicating support for this recommendation:

Users: 1, 33, 34, 37, 38

Services: 2

Equipment: 8, 28

Carriers: 13

Specific Comments:

Users: This recommendation would be expected to yield
            particular competitive benefits to Canadian users. (37)

            This is particularly true if Canada provides services
            to remote areas where only one carrier or organization
            exists to provide these services. (1)

            We strongly concur with this recommendation. If
            implemented it will improve the service available
            to users. (33)

            Interconnections should be effected to ensure competition
            between data communication suppliers within the network
            to encourage efficiency and innovation, and to encourage
            low cost to end-users, in local, domestic, and inter-
            national applications. (34)

Services: This recommendation is needlessly weak. Notwithstanding
            the constitutional and jurisdictional problems, we
            believe that this particular area is one which may
            lend itself to some clever "horse-trading". The
            objective of the CCC/TF should be to ensure that
            interconnection is not only possible, but mandatory. (30)

Carriers: This solution by itself would be inequitable to us
            without similar provisions for the interconnection of
            our facilities to the carrier voice networks. (45)

            Interconnection and competition are incompatible,
            and represent a position contrary to the theme of
            the report. We are not aware of any comprehensive
            study which supports the interconnection of data
            communication systems as being required to effectively
            service the present data communication needs of
            Canadian users. (3)

            Interconnection and competition are mutually exclusive.
            Also innovation would be stifled....this subject
            requires much more intensive study before a final
            recommendation is warranted....the Government of
            this Province opposes the competitive build-up of

second and third carriers in their region. Inter-
connection would tend to stimulate such a build-up
and would be contrary to our views. (5)

We strongly believe that the effect of interconnection
of data networks and the "cream-skimming" that can
result is definitely not in the public interest. (22)

We would emphasize the need for further study of
interconnection........ (40)

We do not agree with nor support any position that
recommends the interconnection of competing tele-
communication carrier systems. However, we submit
that alternative use terminal device connection and
store-and-forward computer utilization provides a
most effective alternative to system interconnection. (55)

This recommendation does not go far enough and ignores
the issue of interconnection to the local switched
telephone system monopoly.....It is unrealistic to
suggest that we be required to allow the telephone
company access to our data networks without reciprocal
rights. (17)

We are in general agreement with this recommendation.....
but at the international level it will be more
difficult to reach agreement on this subject since
the policies of foreign carriers will be involved. (13)

Misc: It would appear that this recommendation is inconsistent
with others intended to foster innovation and competition.
Such requests by the "Focal Point" would not be backed
by authority and thus could be expected to have real
impact only on those competitors who could expect to
profit from interconnection. (27)

Observation:

   The telephone companies oppose this recommendation on the grounds

that interconnection and competition are mutually exclusive. However,

the comments of one carrier (5) indicate that competition would, in

fact, be stimulated. Another carrier (55), while opposing system

interconnection as recommended, suggests that the same results can

be achieved via alternative-use terminals and store-and-forward computer

techniques. Those users who have commented appear convinced that a

more competitive environment would result from the implementation of

this recommendation.

RECOMMENDATION 17:

> The telecommunications regulatory body should be
> empowered to conduct hearings and decide on cases
> involving interconnections between networks of
> carrier or non-carrier organizations offering
> data communication services.

Organizations indicating support for this recommendation:

Users: 1, 34, 38

Services: 2, 30

Equipment: 8, 28

· Carriers: 13

Specific Comments:

Users: We recommend the involvement of the regulatory bodies
            in hearings where interconnection has been denied by
            the carrier to a particular user.....Interconnection
            is the most effective possible climate to maximize
            the benefits of competition between carriers....
            Interconnection would allow the connection of two
            different grades of service (e.g. intercom and
            private wire), each priced profitably for a carrier,
            but with the total system optimally priced for the
            user.....Interconnection offers the best possible
            climate in which to take advantage of our industry's
            plans for sharing circuitry. (34)

            The development of national networks in an east-
            west direction would be encouraged by promoting
            interconnection between the networks of the two
            major carrier groups. (31)

Carriers: There may be certain cases where limited interconnection
            is appropriate, but in general most of our members
            would favour retention of the current competitive
            arrangement between the carriers' networks. (29)

            We agree, subject to the comments made with respect
            to Recommendation 16. (45)

            We agree with regard to existing carriers. We oppose
            entry of additional carriers or non-carriers. (17)

            In view of our position on recommendation 16 the
            outcome of this recommendation is dependent on the
            study of interconnection we have suggested. (5)

Misc: This recommendation implies that the "request" by the
            Focal Point would be supported by law or regulation.
            Its adoption would lead to problems where interconnection
            between organizations responsible to different regulatory
            bodies was at issue. (27)

RECOMMENDATION 18:

            Decisions of the federal telecommunications
            regulatory body should be published and made
            readily available.

Organizations indicating support for this recommendation:

    Users: 1, 38

    Services: 2, 30

    Equipment: 8, 28

    Carriers: 5, 13, 17

    Misc: 27

Specific Comments:

    Services: In a government bureaucracy it is often difficult for
                those in centres other than Ottawa to learn about
                the publication of regulations. We therefore recommend
                that when decisions of the regulatory body are published
                that public advertisements be taken in the daily papers
                of Canada to ensure that all interested parties are
                fully advised. The activities of the CRTC in publishing
                their decisions represent an excellent step forward
                in the activities of a regulatory authority and we
                believe that the regulatory body for the carriers
                should behave in a similar fashion. (30)

    Misc: Publications of the decisions and the policies upon
                which the decisions were based would be welcomed. (27)

RECOMMENDATION 19:

            The plans of the telegraph (railway) companies for
            the immediate development of their teletype and
            data services, and the projected plans of the
            telephone companies for the evolution of a data
            transmission network should be recognized by
            Government as the present viable direction for
            the development of data communications facilities,
            and the Government should, through the Focal Point,

periodically take cognizance of these common carrier
plans, and take steps to ensure the avoidance of
disadvantages to users through incompatibilities
in the communication services offered and to ensure
that the carriers' long-term technical and financial
planning is commensurate with the potential and the
future requirements for computer/communications in
Canada.

Organizations indicating support for this recommendation:

Users: 1, 38

Services: 2

Equipment: 8, 28

Specific Comments:

Services: While this is a noble and worthwhile recommendation,
             we feel that it is too broad and general to be of much
             immediate effect. It lacks any clear goal-setting
             activity for the Focal Point in minimizing the
             interconnection problem. One only has to reference
             the TWX-Telex incompatibility to realize that a
             laissez-faire or "periodic cognizance" of problems
             in these areas is too weak to be meaningful. We
             recommend that it be strengthened. (30)

Carriers: We support the overall recommendation that the
             principal role of the carriers in computer/commun-
             ications should be one of planning, development and
             operation, while that of government one of coordinating
             the various elements involved in national policy-
             making. We are convinced, however, that it is
             absolutely essential for our industry to work with
             government in evolving national policies. (29)

             We are gratified the Task Force acknowledges that
             the carriers' plans for development are sound. While
             we recognize the governments' interest in the development
             of the networks, we have a deep concern over the extent
             of the recommended detailed involvement of the Focal
             Point in matters involving the operational responsibilities
             and entrepreneurial activities of the carriers. (3)

             We believe the advantages of competition far outweigh
             any potential disadvantages which could conceivably
             result from system incompatibility. Technology is
             common to data and voice, and we have a long history
             of technical and financial planning in this area.
             We have and continue to tailor our services to user
             needs and enunciated national and regional goals. It

should be noted that there is nothing projected
about our plans; they are being implemented. (5)

We wish to emphasize that if the word "ensure" is
intended to mean that the Focal Point will dictate
changes in our long-term technical and financial
planning, we disagree with that part of the
recommendation. (55)

We agree that future DATA networks be provided by
existing carriers. (17)

This recommendation is insufficient, as it must
include external as well as internal data
communications. (13)

Misc: This recognizes the disadvantages to users faced with
          incompatible communications services and implies
          government action to ensure compatible planning
          between competing networks. We have long recognized
          that the present state of competition between
          carriers has, in low volume areas, disadvantages
          far exceeding the benefits it brings. It seems
          incongruous to support inter-carrier competition
          only to ensure that the competitors develop
          compatible systems. Would it not be preferable
          to reduce competitive overhead and inefficiency by
          supporting one well regulated utility structure
          such as has been advocated for this region? (27)

Observation:

Most of the carriers object to this recommendation for the

recurrent reason that they fear that the Focal Point could impinge

upon what they view as being their managerial and operational

responsibilities.

RECOMMENDATION 20:

          Government, through the Focal Point, should intensify
          the establishment of a Canadian position on inter-
          national issues in data communications and ensure
          appropriate representation on international bodies.

Organizations indicating support for this recommendation:

Users: 1, 34, 38

Services: 2, 30

Equipment: 8, 28

Carriers: 3, 5, 13, 17, 29, 45

Misc: 27

Specific Comments:

Carriers: We participate actively in I.T.U. Affairs through
              membership in its Telegraph and Telephone, and
              Radio Committees; we therefore fully support this
              recommendation, recognizing the need for close
              industry-government consultation and cooperation
              in order to achieve this objective. (29)

              We agree with the general theme of this recommendation
              but note that it omits the need for consultation with
              industry. (5)

              While we agree with this recommendation, we should
              point out that the characteristics of Canada's
              external telecommunications call for (a) a
              comprehensive and integrated policy to govern all
              external telecommunication activities, including
              traffic to and from the U.S., and (b) a policy to
              ensure that computer/communications developments
              lead to the optimum utilization of Canada's
              telecommunication facilities, external as well
              as internal. (13)

RECOMMENDATION 21:

              Agreements between Canadian and foreign tele-
              communications carriers should be reviewed
              by the Government on a regular basis to
              ensure that the Canadian position on inter-
              national aspects of data communications is
              upheld.

Organizations indicating support for this recommendation:

Users: 1, 34, 38

Services: 2, 30

Equipment: 8, 28

Carriers: 13, 17, 29, 45

Misc: 27

Specific Comments:

Users: The fact that data can be transmitted to the U.S. and
             travel over this network then coming back into Canada
             at a cost considerably less than using Canadian
             facilities indicates that the carriers need to review
             their present rate structures. The introduction of the
             satellite into our communication systems also should
             have a direct impact on both tariffs and technology.
             It is evident, however, that a Canadian body should
             ensure that Canadian rates are competitive to rates
             available in the U.S. as alternatives for Canadian
             users. (34)

Carriers: Government should have national goals in inter-
             national data communications matters which could be
             reflected in agreements between Canadian and foreign
             carriers. With such established national goals it
             would follow that international carrier agreements
             should be subject to regulatory review. It should
             be recognized, however, that agreements are the result
             of negotiations between carriers, consequently some
             flexibility in national goals may be necessary to
             secure overall agreement. (3)

             We agree. Government should establish national
             goals which would be taken into consideration in
             agreements signed between Canadian and foreign
             carriers. (55)

.2.6   Reactions to Data Services Environment Recommendations R22-25

RECOMMENDATION 22:

Policies in computer/communications development
should be oriented, in consultation and co-operation
with the provinces, towards improving service
availability and reducing costs in Canada in order
to offset seconomic and technical incentives for
meeting user needs through facilities outside
Canada.

Organizations indicating support for this recommendation:

Users: 1, 33, 38

Services: 2, 24, 30, 32

Equipment: 7, 8

Carriers: 3, 5, 13, 17, 45

Misc: 27, 53

Specific Comments:

Users: Complete agreement. This would have a direct effect
              on our firm and consumers in, at least, stable prices
              in remote areas where communication costs are now
              prohitive.   (1)

              This recommendation made in response to the north-
              south flow of data is a positive approach to the
              situation.   (33)

Services: Excellent. Tariffs and taxes are a prime example
              of where the government currently has policies which
              are in direct conflict with the objective of this
              recommendation, Canadian corporations currently
              are found with substantially higher equipment costs
              than their U.S. counterparts. (32)

              The realities of Canada are that we have an unbalanced
              population distribution......Canada is an economic
              fact of life and many people are interested in maint-
              aining the integrity of this nation. The Focal Point
              should do everything possible to ensure that data
              processing and communication services are obtained in
              Canada. We fully support this recommendation.   (30)

Equipment: General agreement.....mini-computers in particular
              have become so modular that it is conceivable that
              components could be placed in inventory and the

assembly of a system could be completed at the
customer site.....It is important that government
policies remain sensitive to the mini-computer
segment of the hardware supply industry and that
free market forces be allowed to operate to the
maximum extent possible. (8)

Carriers: We agree with this recommendation. We caution,
however, against the expectation that Canadian
costs and tariffs can be reduced to the point
that no economic advantage for the use of
facilities outside of Canada would remain. (3, 5)

RECOMMENDATION 23:

Organizations offering data services commercially
to customers through telecommunications facilities,
with terminals on remote premises, should be
required to register with an appropriate body,
and file information on their corporate structure,
and on their data services.

Organizations indicating support for this recommendation:

Users: 1, 38

Services: 2, 30

Carriers: 5, 13, 17, 45

Specific Comments:

Users: We oppose this recommendation. In our opinion it
clearly suggests the creation of large bureaucratic
apparatus. The role of the federal government should
be one of interim mediation and not regulation,
wherever possible. (34)

Services: To what end? Unless a more specific purpose is found
this will only create costs. (32)

I can see no reason or justification for singling
out data services for registration purposes. Many
other businesses and industries could have situations
which lead to unfair competitive practices, socially
undesirable results, etc., and are not required to
"register". The Task Force's difficulty in gathering
information is unfortunate but not justification for
the bureaucracy implicit in such registration. (43)

We do not feel the need for registration to be a
real one. Sources of information that could provide
the same capability currently exist in Statistics
Canada or are available through industry sources. (24)

We are pleased to see that this recommendation has
been included in the report. A few specific details
need to be amplified, such as whether registration
is before or after service is established, and
whether the Registrar would publish on some
predetermined schedule. A further possibility might
be that registration or licensing of user terminals
should be undertaken on an annual basis, to ensure
that the Focal Point has a full understanding of
growth in this dynamic industry. (30)

Equipment: Any information necessary for government studies in
communications-served data processing services can
be collected effectively as required, through quest-
ionnaires, interviews and the services of Statistics
Canada. (28)

We do not agree with the recommendation for registration.
Existing governmental groups such as Statistics Canada.
or the Department of Consumer and Corporate Affairs
should be able to collect, analyze and issue infor-
mation as required. (25)

Carriers: We agree and suggest the "register" should be available
to the public. We would suggest that the form on which
corporate information would be provided, should be
prepared in consultation with the carriers. (5)

We believe this would be impractical to enforce and
of questionable need. (55)

Misc: The report specifically points out that this recommendation
does not call for a discretionary licensing system. The
recommendation does indeed sound, however, similar
to a licensing system and would add one more requirement
to the growing red tape faced by business in Canada.
We suggest that the information required should be
obtainable through existing systems such as those
available to Information Canada. (27)

Observation:

There appears to be substantial opposition to this recommendation

from many quarters. This opposition is based upon a number of view-

points, including: the belief that it would create a large bureaucracy;

that the information may already be available or that it could be

obtained through existing departments; that the proposal would not be effective because much information would be unobtainable by definition; and that the recommendation would be impractical to enforce. Similar comments have been made with respect to the institutional proposal for a Registrar (q.v.). On the other hand, most carriers do not oppose this recommendation; and support from one industry association (30) is in contrast to disagreements expressed by a number of firms within that industry segment.

The substantial opposition to this recommendation is rather surprising in view of the responses to the Task Force on Computers and Privacy. Their study revealed that some seventy percent of respondents (of a total of 1215) either agreed or strongly agreed with the statement that registration as to purpose and contents was necessary for data banks containing personally identifiable data.

RECOMMENDATION 24:

> Governments should recognize the importance to
> the public interest, of a strong Canadian-controlled
> data processing services industry.

Organizations indicating support for this recommendation:

    Users: 1, 38

    Services: 2, 24, 30, 32

    Equipment: 4, 7, 8, 15

    Carriers: 3, 5, 13, 17, 45, 55

    Misc: 53

Specific Comments:

Services: Excellent. If the industry is to be Canadian controlled
              and owned, action is required by the government to create
              a climate in which the industry can flourish. Equipment
              rebates with respect to tariffs and tax could be made
              to all companies with Canadian ownership. Government
              policy should review the antiquities of our past which
              discriminate against the industry's development.
              Ancient legislation pertaining to book publishing
              cannot be applied to computer printouts. (32)

              This is a most obvious statement observing that the
              study conclusively establishes the need for recognizing
              a strong domestically controlled industry. (2)

              We strongly support this recommendation....We believe
              that we must participate actively in a dynamic inter-
              national environment, but at the same time the reality
              of the distribution of economic power on this continent
              is such that if Canadian governments do not fully
              understand and appreciate the longer term implications
              of this industry, Canada will have placed difficult
              constraints on her future growth patterns. (30)

Equipment: The technical quality of the Canadian controlled
              organizations who are already represented in the
              data processing services industry is high, and this
              is a further justification for the government
              capitalizing on maintaining this Canadian identity. (8)

              We believe "Canadian-controlled" can be defined in
              managerial and social terms and should not be construed
              as having a purely equity or financial connotation. (15)

              We fully support the Task Force position....We believe
              however, that the Task Force has tended to over-emphasize
              the financial, equity or "ownership" issues in its
              definition of control. (4)

Carriers: We agree that organizations within the industry should
              be fully subject to all Canadian laws and regulations
              and appropriate measures should be established to
              ensure that the corporate conduct and operations of
              such organizations conform to Canadian requirments and
              interests. (3)

              We agree with the comment of our Association's President
              that actual Canadian ownership is not essential "as long
              as appropriate measures are established to ensure that
              corporate conduct and operations are in the best interest
              of Canada." This is the basis upon which we have
              operated in the past....... (40)

Observation:

The words "Canadian controlled" connote different meanings among respondents. One of the Canadian-owned service companies (32) apparently reads this recommendation to imply strong support for Canadian-owned service enterprises. Many of the larger, foreign-owned entities are concerned that "Canadian controlled" does not become equated with "Canadian-owned".

RECOMMENDATION 25:

> Before computer-based information services are
> offered on a regular basis to individual Canadians
> and the public in general, governments should consider
> the feasibility of imposing special requirements on
> Canadian ownership and control of organizations
> providing services which convey cultural values
> analogous to those conveyed by broadcasting systems,
> and on the volume of material from Canadian sources
> made available through such service.

Organizations indicating support for this recommendation:

Users: 1, 38

Services: 2, 24, 30

Equipment: 8

Carriers: 13, 17, 45

Misc: 18

Specific Comments:

Users: Complete agreement. The legislation should be stronger
            on this point. The storing of this information outside
            of Canada should be forbidden. The Government cannot
            take a weak position on this issue. To do so, would
            be a defeat to the Canadian people and the industry
            that the policy is trying to develop. (1)

Services: This may be interpreted as too little too late. If the
            government attempts to establish policy as industry
            develops into specific areas, the policies will only
            be able to deal with situations that already exist.

The government should direct itself to the establishment
of policies that can be used in future to see that new
technological industries remain in Canadian hands. (32)

Surely we are not naive enough to believe that
Canadian technology in the computer service industry
will generally be sufficient to satisfy the needs of
Canada'a public institutions and governments. Surely,
quality and price of the services should be an important
determinant as to which supplier is selected to provide
services to public institutions. (43)

We support Canadian control of the data processing
service industry, particularly where cultural values
are concerned. However, the impact of computer systems
on cultural values and the individual in our society
is, to a large extent, over-stated by the Task Force.
Such a concept does not take into account the realities
of the service industry today. (24)

It could very well be that this may be one of the
most important recommendations in the CCC/TF study
and that it may be necessary for the Focal Point to
develop Canadian content rules similar to the CRTC.
It may be necessary to consider placing constraints
on growth of non-Canadian enterprises such as was
done in the banking industry vis-à-vis the Mercantile
Bank of Canada. The ground is shifting too much for
Canada to have any hard and fast answers in this
area but we support the recommendation as representing
a beneficial first step. (30)

Equipment: It seems to us that the attention of governments
should be focussed on the content and quality of the
services containing cultural value, and to the Canadian
control of these services, rather than to the ownership
of the organization providing the services. (28)

Even Canadian financial ownership of a data services
organization cannot guarantee that the management and
operation of data centres would be undertaken by
competent, conscientious and socially concerned
individuals. It cannot guarantee either that it
would not resort to the use of foreign facilities
for back-up purposes. What are required are clearly
stated government policies which enable the services
industry to be as internationally competitive and cost
effective as possible to the ultimate Canadian user. (4)

Carriers: Whether or not such organizations are directly owned
in Canada is not, in our view, of critical importance
as long as appropriate measures are established to
ensure that the corporate conduct and operations of

such organizations are in the best interest of
Canada (3)

We believe corporate ownership of organizations
providing computer-based information services
which convey cultural values is not of major
importance. However, we agree that such an
organization be subject to the fullest govern-
mental control in Canada, as to content and
conditions under which these services are
provided. (5)

Misc: We are much more concerned with the question of
control than with that of ownership. We recommend
that attention be given primarily to control of
Canadian facilities and, through proper regulation,
with ensuring that the use of those facilities is in
the best interest of the Canadian Public. Under
these conditions the question of ownership will
not be significant. (27)

I agree completely with recommendation 25, but this
recommendation should be extended to include all data
processing organizations, since it is very difficult
to differentiate between those which convey cultural
values and those which can be assumed to convey only
business information. (18)

Observation:

It is of interest to note the emphasis that respondents place on

the control and regulation of this type of service. "Constraints",

"appropriate measures", "fullest governmental control", and "proper

regulation" are some of the phrases used to describe the necessary

environment. These are in sharp contrast to their expressions of

concern about controls and regulation in other areas.

2.7   Reactions to Priorities of Government Support Recommendations R 26-30

RECOMMENDATION 26:

The Focal Point should periodically, and in close
cooperation with associations and industries, under-
take idenfication of user needs and evaluation of the
impact of existing and projected computer communications
systems on society.

Organizations indicating support for this recommendation:

Users: 1, 38

Services: 2, 24, 30

Equipment: 8

Carriers: 17, 45

Misc: 27, 41, 47.

Specific Comments:

Services: The attachment of non-government advisors to this
              group would lower the requirement for periodic
              reviews and would keep this group more current on
              the developments in the country and allow policy
              to relate more directly to industry. (32)

              We support this recommendation but would make this
              observation: it will be difficult for the Focal
              Point to walk that thin line between leading and
              following market demands. In a world as technically
              innovative as computer/communications many things
              are possible but only few things are attainable.
              The Focal Point will need to develop a deep and
              sensitive understanding of the dynamics of market
              forces to fully understand and appreciate, let
              alone evaluate, service offerings in this industry. (30)

Equipment: General agreement. We feel that the report has done
              an excellent job of identifying those user needs in
              which a strong element of Canadian identity and control
              must be maintained (e.g. banking, finance, etc.) but
              there are many applications in the resource industries
              that should get the close attention of the Focal Point
              mainly because they are somewhat unique to the
              Canadian environment. (8)

Carriers: We agree, but this recommendation could be construed as
              advocating direct participation by the Focal Point in
              the normally commercial/competitive activities of

identifying user needs, evaluating effective demand,
and allocating resources to create operating systems
to profitably satisfy this market demand. We feel
that the Focal Point should not participate directly
in this dynamic facet of business management. (45)

It is our opinion that the idenfitication of user
needs should continue to be a fundamental marketing
function, and as such is the responsibility of
industry. It is a basic premise of a competitive
market system that competitors will be vying to
satisfy user needs. The evaluation of the impact
of existing and projected computer/communications
systems on society is an appropriate role for
governments. The results of such an evaluation
would constitute a basic input to the establishment
of national and regional goals. (3)

Identification of user needs should be left to industry.
However, if industry were ignoring user needs then
government would have a role to play. (5)

We feel that this recommendation should be restated
as follows: "The Focal Point should, periodically
and in close cooperation with associations and
industries, assess whether data communication needs
as perceived by sociologists are being adequately
met and evaluate the impact of existing and projected
computer/communications systems on society." We feel
it is the responsibility of the carrier to identify
express user needs and implement plans to satisfy
them. (55)

The CC/CIPB rather than the Focal Point should have
primary responsibility for identifying user needs and
should include external as well as internal requirements.
The findings of the Board could be made known to the
Focal Point on an annual or other predetermined basis. (13)

Misc: This would appear to involve a periodic updating of
the work of the Task Force and would be worthwhile. (27)

We recommend that you use our Association as one of
your advisory sources. Because of our diverse member-
ship, we can accurately reflect user needs and we do
have a great deal of interest at the policy level. (47)

Observation:

It was noted in the text leading to this recommendation in "Branching
Out" that some user needs were not functions of market supply. Further-
more, the assessment of whether user needs in a general sense were being
met adequately presupposes that they have been identified and that the
Focal Point is aware of them.

RECOMMENDATION 27:

> Government should stimulate the advance of special
> computer/communications systems, particularly those
> having broad social benefits to Canadians, by making
> funds available through the Focal Point for pilot
> projects undertaken by or in conjunction with
> associations, industry, universities and governments
> at all levels.

Organizations indicating support for this recommendation:

Users: 1, 34, 38

Services: 2, 24, 30, 32

Equipment: 7, 8, 28, 42

Carriers: 3, 5, 13, 17, 45

Misc: 14, 27

Specific Comments:

Users: This recommendation is fully supported and it is
            suggested it should be given priority. (38)

            We support the recommendation.....Any system which
            improves the liquidity and accessibility of securities
            markets is clearly of broad social benefit....we have
            two or three special systems under consideration which
            would appear to qualify for just such pilot project
            support. (34)

Services: We heartily endorse the need for pilot projects, which
            will be in the public interest. (2)

            This recommendation is fully supported by us, and
            should be implemented immediately. (30)

Equipment: This will enable substantial advances to be made on
            the national and international scenes with low
            associated costs. As a company, we look forward
            to early participation in this plan. (42)

            We agree with this recommendation for government
            encouragement and assistance of pilot projects,
            particularly those having broad social significance
            and benefits. (28)

            We would like to point out the importance of a close
            cooperation between research teams and the entrepreneurial
            fraternity in Canada. (8)

Carriers: We agree, and in fact have undertaken pilot projects
                in the past and would expect to continue to do so
                in the future. (3)

                We would urge that to the greatest extent possible
                the funds be allocated for mission oriented ventures
                that rely on industrial participation to ensure
                practical results in the market place. More over,
                the recipients of such incentive grants should be
                given the widest possible latitudes to develop their
                own ideas, to test success in the real world, and to
                achieve ultimate acceptance in the market. (55)

                We strongly support a coordinated effort by industry,
                universities and government research laboratories under
                the auspices and direction of the Focal Point. (13)

Misc: We agree with the stimulation of computer/communications
                systems oriented to social benefit but caution against
                the subsidization of systems on a long term basis. (27)

RECOMMENDATION 28:

                In Government support of projects, priority should be
                given to those which involve the formation of regional
                and nation-wide computer systems in the public sector,
                designed to make available on a shared basis, computer
                and specialized data bank facilities to public institu-
                tions and to the general public.

Organizations indicating support for this recommendation:

    Users: 1, 34, 38

    Services: 2, 24, 32.

    Equipment: 8.

    Carriers: 5, 13, 17, 45.

    Misc: 44

Specific Comments:

    Users: Assuming that this means information storage and retrieval
                systems accessed by dial-up and dedicated lines, the
                recommendation is fully supported. Coordinated planning
                of the scope and nature of all the data bases is essential
                but no benefits can been seen in trying to establish
                some all-embracing dedicated network, which would impede
                rapid development and be inflexible. (38)

Experience has shown that market data of all types is
of considerable value to many sections of the public...
A Canadian centralized data bank would offer advantages
of reliability and accuracy, that the present fragmented
data banks cannot match......Universities would benefit
from the availability of large data bases to support
their research....our industry would be significantly
aided by an authoritative data bank which would improve
the availability of information about Canadian
securities.... (34)

Services: Only by an active involvement of all data processing
facilities on a coordinated and complementary basis
can we effectively gauge our contributions and accurately
assess our level of efficiency. A greatly increased
exchange of knowledge and increased utilization of
facilities will render the industry generally more
viable and thus stronger. (2)

While recommendation 28 has strong emotional appeals,
the efforts of the Focal Point should be directed towards
attaining those objectives which are realistic in the
medium term. There are many long term objectives, but
the Focal Point should be concerned with establishing
a realistic and commercially successful computer services
industry in the short term. (30)

Carriers: This recommendation seems consistent with government's
role to encourage the establishment of public services
on a fair competitive basis. However, we would strongly
disagree if government action as a general policy were
to include the establishment of government-owned facilities.
(3)

Misc: We would be pleased to assist in the implementation of
the report, especially Recommendation 28, through the
proposed CANUNET project. (44)

It is agreed that priority should be given to the
development of regional computer systems in the public
sector. However, we are concerned that centralization
of systems on a national basis tends to remove decision
making and highly competent technical personnel from
the outlying regions of the country and thus tends
to impede development in those regions. (27)

RECOMMENDATION 29:

In conjunction with universities and other research
institutions Government should foster multi-disciplinary
research on the long-range social effects of computer
and communications.

Organizations indicating support for this recommendation:

    Users: 1

    Services: 2, 24, 30, 32

    Equipment: 7, 8

    Carriers: 3, 5, 13, 17, 45, 55.

    Misc: 14, 27

Specific Comments:

    Users: It is possible to have inadvertent technological
                misuse through inability to establish the long
                term effects of a particular technological usage.
                However, attempts to determine this in advance such
                as proposed in recommendation 29 need to be conducted
                with extreme caution. Forecasts, particularly in
                such a complex area, are notoriously unreliable,
                and policies should not be established to deal with
                possibilities. As the "future" results from decisions
                taken today, it is preferable to adopt an evolutionary
                approach by continually monitoring cause and effect
                relationships and providing corrective action as
                necessary. (38)

    Services: A noble recommendation and one which we would support,
                provided it is assigned a realistic priority in the
                hierarchy of values. (30)

    Carriers: We agree that government should foster such research
                and should ensure that the results of such research
                are appropriately disseminated throughout the
                industry (3)

                We agree and would like to participate. (55)

RECOMMENDATION 30:

                Existing government research laboratories should
                include in their programmes selected areas of
                computer/communications technology and make the
                results available to public and private organizations
                for the development of techniques and applications
                specifically adapted to Canadian needs.

Organizations indicating support for this recommendation:

Users: 1, 38

Services: 2, 24

Equipment: 7, 8

Carriers: 3, 13, 17, 45

Misc: 27

Specific Comments:

Services: I can see no purpose served by government research.
            Surely a stronger industry will result with these
            funds being transferred directly to industry to
            encourage them to develop a greater overall capability. (32)

            This seems to be at variance with recently announced
            government policy as set forth by the Ministry of
            State for Science and Technology. The Minister stated
            that it was in those newer areas of research where it
            was expected that the greatest impact would occur
            vis-à-vis government centres and the commercial
            sector. Surely one of these must be the computer
            communications area. Because of the lack of success
            and the expense of these centres, we strongly
            recommend that this recommendation be reconsidered. (30)

Equipment: This recommendation is based on a fallacious philosophy.
            The concept industry will derive substantial benefits
            from developments done in government laboratories is
            not supported by facts. The chances for industrial
            spin-off from government research is minimal. The
            R & D has to be done in industry if Canada is to
            derive the maximum benefit from the expenditures.
            It is to be noted that the Ministry of State for
            Science and Technology has accepted the validity of
            the concept of contracting out R & D to industry where-
            ever possible. (26)

            In previous submissions, we have strongly supported
            the concept of government assistance in the design and
            development of computer applications software and in
            the development of distance-independent communications
            facilities.....We welcome the recent proposals to have
            the government stimulate research in the private sector
            wherever possible, rather than conduct it directly
            with government staff. If properly administered, a
            program of research and development stimulation can
            have beneficial results, and can avoid the vested

interest problems associated with pilot projects
undertaken by non-market-responsive institutions. (4)

Carriers: We believe that the major portion of government support
should be devoted to the development of research and
development capabilities in industrial laboratories
that are directly concerned with practical innovation. (55)

Observation:

It is significant that all of the respondents who have commented

in detail on this recommendation are generally opposed to the

continuation or expansion of research and development in government

research laboratories, particularly in view of the pronouncements

from the Ministry of State for Science and Technology. However,

the Task Force did not have in mind an expanded role for these

laboratories, but rather that on the assumption of their continued

existence, they might redirect certain efforts and resources towards

answering a number of technological problems which are perhaps peculiar

to the Canadian computer/communications environment. The Task Force

position approached that of respondents when it stated "...the Task

Force believes that the major part (of technological research) should

be performed by private industry...." (Branching Out, p. 156)

2.8   Reactions to Government Support of Industry Recommendations R 31-32

RECOMMENDATION 31:

> Government should continue its efforts to ensure
> that foreign or multinational computer and communications
> corporations with substantial sales in Canada, expend
> appropriate sums in Canada on research and development
> leading to manufacturing activities.

Organizations indicating support for this recommendation:

Users: 1, 38

Services: 2, 24

Equipment: 7, 8, 15

Carriers: 3, 5, 13, 17, 45, 55

Misc: 27

Specific Comments

Users: These levels of funds should be set by law if necessary.
              This is especially true if the R & D capabilities, as
              discussed in the Economic Council Report, are worthy
              of consideration. We realized the implication of
              this, but the government may have to take this stand
              if a viable scientific effort is to be maintained in
              Canada. (1)

              The appropriate sums to be spent by the computer and
              communications corporations would represent a relatively
              small portion of their total research and development
              costs. (37)

Services: The recommendation limits itself to computer and comm-
              unications corporations. What then happens with the
              Shell Oil's, the Esso's, the General Motors, etc. as
              communications opens cross-the-border operations? This
              will surely result in greater centralization of systems
              development activities to the detriment of those Canadians
              who are employed in the field. (32)

              We leave to politicians the art of the possible, but
              point out that carrots and sticks both have their place
              in getting mules to move. The recommendation is
              negligent in not mentioning the possibilities of an
              intelligent application of the Canadian tariff vis-à-vis
              computer hardware. Arrangements similar to the auto
              pact are possible, and the Focal Point should take
              as one of its prime responsibilities development and

enunciation of a more dynamic policy vis-à-vis the
multi-national computer manufacturers. (30)

Equipment: The customs tariff problem is currently one of the
most aggravating, not only to international corporations
operating manufacturing and marketing facilities in
Canada, but also to Canadian firms who are denied a
clear set of ground rules by which to operate. We
would criticize this report for not placing greater
emphasis on the early solution of these practical
problems. (8)

What is now important....is that the federal and
provincial governments support Canadian research,
development and manufacturing by making their requirements
known on a reasonable and timely basis, and then by
purchasing Canadian built equipment whenever possible.
Preferred consideration should be given to those
companies which do attempt to be good corporate
citizens in terms of their overall contribution. We
have also suggested to the Tariff Board a general
means whereby companies manufacturing in Canada
could earn the right to import an equivalent value
of similarly classified products into Canada on a
duty free basis and thus contribute to a maximization
of Canadian productivity. (15)

The effect of recommendation 31 is quite obviously to
ensure that foreign subsidiaries become more firmly
entrenched, by expanding their hold on the Canadian
computer industry! Furthermore, such a policy would
practically eliminate any possibility of Canada ever
developing a Canadian-owned computer industry, which
would be a catastrophe of the first magnitude in view
of the anticipated size of the industry. It is aston-
ishing that the Task Force has completely ignored the
policy adopted by the Japanese Government....It is
most unlikely that both the Task Force policy and the
Japanese policy are right! This failure must be regarded
as a serious omission. (26)

Misc: This recommendation is generally acceptable to us,
we feel that Canadian corporations should be similarly
encouraged to engage appropriately in research. (27)

Observation:

A number of companies feel that the achievement of the objectives

of this recommendation is closely related to the outcome of changes to

customs tariffs for computer and communications products, which have

been suggested to the Tariff Board. The nature and degree of this

relationship is extremely complex, and opinions vary as to the effect of customs tariffs on the volume of research and development activities. The Science Council, in report No. 15, suggests that non-tariff barriers may have at least as great an effect on the general climate for innovation, as do tariff barriers.

RECOMMENDATION 32:

>Incentives should be granted to Canadian enterprises for all phases of innovation in the computer/communications field, particularly in application software and ancillary equipment development.

Organizations indicating support for this recommendation:

Users: 1, 38

Services: 2, 24, 30, 32

Equipment: 7, 8, 25

Carriers: 3, 5, 13, 17, 45, 55

Specific Comments:

Users: The intent of this recommendation has our support, however, the effectiveness will depend on the method of implementation. Because of the difficulty in determining which projects deserve public support, financial incentives invariably result in a considerable waste of public funds. The most effective approach is to examine all existing tax and other regulations and eliminate or modify those which are a hindrance to innovation. (38)

            A positive role for government in the development of Canadian computer capabilities is to promote research and development in software and applications. (31)

Services: Excellent, but the report avoids the issue of computer facilities available across Canada....if some government services were decentralized and processed regionally in conjunction with industry, viable commercial centres could be established....The true emphasis must be placed on the development of service people and not on equipment.   (32)

Equipment: The expansion of incentives such as PAIT to cover
             application software and ancillary equipment development
             are necessary if Canada wishes to increase its role
             in this industry noted for its strong multinational
             companies and blossoming transnational ventures. Such
             incentives will enable computer companies in Canada
             to develop equipment and services for both domestic
             and export markets. (25)

             We are in general agreement with this recommendation,
             but we urge that caution be applied in the administration
             of incentives because they are not the only method of
             creating a fertile business environment. (8)

             Recommendation 32 is useless since it lacks recommendations
             for specific action. What is so desperately needed is a
             dettailed program to achieve the goal. The best incentive
             possible is a sensible 'Buy Canadian' policy in which the
             Canadian government restricts its purchases to products
             and services supplied by Canadian-owned industries.....
             unfortunately, there is a complete lack of economic
             data needed to support and justify such a policy.....
             Regretably, the Japanese economists do understand the
             economic of modern industry, to Canada's disadvantage. (26)

Carriers: We agree but suggest in the public interest that there
             should be coordination so we don't squander resources on
             the same project. (5)

Misc: The word "incentive" is taken to means grants or direct
             financial assistance. While this form of aid may be of
             assistance in the establishment of industry, our
             experience indicates that it is not a particularly
             effective tool for creation of innovation. (27)

             Canada can compete with the U.S. in the development of
             specialized software for small computers. Encouragement
             to do so will help to provide the Canadian alternative that
             has proved so elusive to date. (36)

<u>Reactions to Education and Training Recommendations R 33-35</u>

RECOMMENDATION 33:

> Government should support professional and industry
> associations in their endeavour to organize and
> stimulate the provision of suitable training
> programmes in the field of computer/communications
> in collaboration with educational institutions.

<u>Organizations indicating support for this recommendation</u>:

Users: 1, 38

Services: 2, 24, 30

Equipment: 8

Carriers: 3, 5, 13, 17, 45, 55

Misc: 14, 27, 41, 47

<u>Specific Comments</u>:

Services: We support this recommendation as we feel strongly
             that development of capable and competent professionals
             in the computer services industry will have the most
             beneficial long-term effect.   (30)

Carriers: We agree and suggest some kind of national minimum
             standards to optimize national computer/communications
             operations.   One form of this support could be to
             assist industry and professional associations in
             establishing minimum acceptable standards for
             graduates of training schools entering the computer/
             communication field.   (3, 5)

Misc: Our Council states that it is in full accord with the aims
             and direction taken by the Task Force Report and feels
             certain that its members are willing to assist in the
             implementation of recommendation 33 re professional
             education.   (41)

             This is a worthwhile recommendation which recognizes
             the role of the professional associations in self-
             motivated education of members.   (27)

RECOMMENDATION 34:

> Government should encourage post-secondary educational
> institutions to offer courses on the multi-disciplinary
> aspects of computers and communications systems.

Organizations indicating support for this recommendation:

    Users: 1, 38

    Services: 2, 24, 30

    Equipment: 7, 8

    Carriers: 3, 5, 13, 17, 45, 55

    Misc: 27

Specific Comments:

    Services: The curriculums are too machine and technically oriented
              as opposed to business and application oriented. This
              recommendation should be made more specific to direct
              a greater effort into the area where computing has
              found its maximum uses, in business applications.
              The problem for the 1980's will be the design of
              general application commercial software toward the
              elimination of redundant systems and programming
              development. (32)

              We fully support this recommendation and believe that
              this is a valid area of contribution by the universities. (30)

RECOMMENDATION 35:

              Government should encourage research and development
              into the use of computers at all levels of education
              through co-ordinated funding on a multi-disciplinary
              basis and extension of existing programmes in tech-
              nological development.

Organizations indicating support for this recommendation:

    Users: 1, 38

    Services: 2, 24, 30

    Equipment: 8

    Carriers: 3, 5, 13, 17, 45, 55

    Misc: 14

Specific Comments:

Services: We do not fully understand Recommendation 35, but as it
appears to be related to applications orientation of
computers it would appear to be one that we favour. (30)

Carriers: We agree with this and in fact have already participated
in several experiments of this nature. (5)

Misc: This recommendation neglects research and development in
computing as a discipline. Some recognition should be
given to the importance of Computer Science as a pure
science and its relationship to Applied Computer Science,
or computer applications. (35)

I recommend that you broaden your interpretation of your
recommendation, so that greater emphasis is placed on
the importance of strong research, training and development
activities, in the core areas of computing. By this I
mean those activities which are closely related to the
central idea of programming. This would include the
design, testing and maintenance of software systems,
and the development of tools for the implementation
of such systems in an effective way. (14)

If the full advantages of computers are to be realized
in education, this recommendation must be taken seriously.
However, this sort of research and development today is
largely beyond the financial reach of the poorer Provinces
whose resources are already strained to the limit by
present educational demands. (27)

2.10   Reactions to Standardization Recommendations R36-37

RECOMMENDATION 36:

> The Focal Point should co-ordinate the participation
> of the federal government in national and international
> standardization activities relating to computer/commun-
> ications, and, in conjunction with provincial governments,
> industry and user associations, promote the preparation,
> publication and adoption of standards for an orderly
> and coherent growth of computer/communications in
> Canada.

Organizations indicating support for this recommendation:

Users: 1, 38

Services: 2, 30

Equipment: 8

Carriers: 13. 17, 45

Misc: 27

Specific Comments:

Users: Interconnection of user owned/rented computers and
            rented carrier communications is now possible in most
            cases, to satisfy most Canadian needs. What is lacking,
            is published standards of both computer and communications
            specifications which would ensure compatibility of
            both systems. (49)

Services: Where standardization relates to computer applications,
            this recommendation is critically dependent on the degree
            to which government is involved. The qualifications of
            government organizations to define user needs and
            application standards are questionable. To the extent
            that the industry is encouraged to formulate standards,
            we support this recommendation. (24)

Carriers: We agree. This would be a most useful role for the Focal
            Point. (45)

            There is evidence that some communications standards have
            been compromised in the U.S. Compromise in order to
            obtain agreement is not necessarily desirable. There
            are two types of standards: (i) for protection of
            carriers networks; (ii) for technical compatibility of
            terminal equipment with networks. The carriers should
            have a strong voice in the establishment of the first,
            and while the second is of concern principally to

manufacturers, the carriers must recognize their
responsibility to ensure that manufacturers are
fully aware of operational requirements. (3, 5)

We wish to emphasize that the carriers have prime
responsibility for network standards. (55)

Misc: There is an obvious need to encourage formulation and
acceptance of standards in computer systems. This,
however, must be tempered by the realization that rigid
standards do not encourage the experimentation and
innovation vital to further development of this young
industry. (27)

RECOMMENDATION 37:

Government should provide funds in order to increase
the particpation of user groups in the formulation of
standards, and place increased emphasis on communications
particularly in regard to inter-connection of networks.

Organizations indicating support for this recommendation:

   Users: 1, 38

   Services: 2, 24, 30

   Carriers: 13, 17

   Misc: 41

Specific Comments:

   Services: This strikes us as a sensible regulation, for it is
reasonable to believe that user groups will nearly
always be at a disadvantage vis-à-vis computer hard-
ware manufacturers and other more traditionally-
oriented standards organizations. (30)

   Carriers: We agree. However, with respect to the particular
emphasis to the 'interconnection of networks', we refer
to our comments to Recommendations 16, 17, and 18. (45)

See the response to recommendation 16. (3)

We feel this whole area requires much greater study
before recommendations can be made. (5)

Please see our response to recommendation 16. (55)

   Misc: We would like to see a program wherein Canadians can
participate from any province without regard to travel

costs.....Grants for research to enable standards
groups to support projects that require a great deal
of manpower would enable the CSA to do a job second
to none in the world. Some of the standards work will
have a direct bearing on the productivity of
Canadian EDP users and software exporters. (41)

2.11 <u>Reactions to Government as a User Recommendations R38-39</u>

RECOMMENDATION 38:

> Steps should be taken to ensure that the policies
> for internal federal government data processing
> and data communications activities are continually
> related to national policies in the computer/
> communications field.

<u>Organizations indicating support for this recommendation</u>:

Users: 1, 38

Services: 2, 24, 30

Carriers: 3, 5, 13, 17, 45, 55

<u>Specific Comments</u>:

Users: Complete agreement. Strong enforcement policies
            will be needed by the Government in this regard
            to prevent the empire building of computer facilities
            that has been happening in the past. (1)

Services: We support this recommendation wholeheartedly. We
            have made the point quite clearly that full-costing
            of in-house government computer services were
            essential for realistic comparison with outside
            computer services. The rule should be that all
            government computer services be purchased outside
            and that the exception should be to provide such
            services in-house. While this rule may sound harsh
            and restrictive, the Government can further develop
            the computer services industry by its firm and
            strong application. (30)

Equipment: This will be a difficult accomplishment. We would urge
            extreme caution in using such a young and immature
            industry as an instrument of experimenting with national
            goals, for the reason that controls will be too difficult
            to monitor and implement. For example, if DSS were to
            adopt a policy of favouring those companies that have
            received DREE or DITC incentives, it is conceivable
            that other companies which might be contributing
            significantly more to the economy could suffer an
            unfair advantage. Certain companies do not participate
            in these schemes for various reasons, but they should
            be free to refuse such incentives without being 'locked
            out' of certain government purchases. (8)

Carriers: Exception is taken to the comment following the recomm-
            endation that Crown corporations be included with internal

federal government departments for purposes of
setting policies. Since Crown corporations are set
up to carry out operations independent of direct
government influence and in competition with privately-
owned commercial enterprises, they should be treated
in the same manner as privately-owned industry with
respect to interfaces with government and its agencies. (45)

This would seem to us to be a worthwhile objective. (5)

RECOMMENDATION 39:

Federal Covernment policies, for the procurement of
computer and communications goods and services to
satisfy the internal needs of departments, should be
directed towards the greatest possible stimulation of
of the computer/communications industry in Canada.

Organizations indicating support for this recommendation:

Users: 1, 38

Services: 2, 24, 30

Equipment: 7

Carriers: 3, 5, 13, 17, 45, 55

Specific Comments:

Equipment: We would add to this recommendation that it should
             apply to all Crown corporations and publicly funded
             organizations in Canada.   (7)

             Recommendation 39 is a platitude. Specifically,
             how is the goal to be achieved? The comments made
             re recommendation 32 also apply to this one. (26)

. Reactions to suggestions for Institutional Arrangements

.1 Reactions to the need for new institutional arrangements or to the suggested arrangements as a whole.

Services: While in some respects the institutions framework seems rather cumbersome, it may well be justified by the undoubtedly complex range of requirements to be met. (23)

We feel these suggestions regarding federal government institution arrangements are justified in all respects excepting where it is recommended that the Focal Point reside in the Department of Communications and where the existence of a Registrar of National Computer/ Communications Networks is recommended. (24)

Carriers: ...We endorse in principle the structures proposed in the report.... (29)

...We are most favourably impressed with the care with which the institutional arrangements in general have been handled. We agree that a workable institutional framework is essential for the satisfactory development of computer/communications in Canada, and we commend the Task Force for the attention which it showed to this important, albeit dynamic and changing, area. (45)

We find it difficult at this time to give unqualified endorsement to the basic thrust and considerations of the role of institutions. We believe that to accept what would appear to be a plethora of additional institutional measures, without first examining and giving consideration to existing federal and provincial jurisdictional aspects, would be most unwise... (3)

We question the recommendations advanced concerning the role of institutions. This industry has historically existed in a satisfactory regulatory climate involving both Federal and Provincial agencies. The type of institutional arrangements proposed do not appear to recognize this existing Canadian Telecommunications regulatory framework, which, we believe, has demonstrated its ability to meet Canada's regional aspirations in the telecommunications areas, and we believe these existing arrangements could also adequately serve the computer/communications areas. (5)

We are concerned with the implications of many of the institutional arrangements....We question the need for the establishment of additional regulatory bodies in the areas of computers and telecommunications. We

believe that existing government agencies are equipped
to regulate the operations of both computer establishments
and telecommunications carriers throughout Canada. (22)

We would emphasize the importance of....the role of
institutions as a priority item for immediate attention...
...we feel very strongly that new institutions should
not be created until the roles of existing institutions
have been clarified and expanded if necessary. (40)

Misc: We think that the proposed institutional arrangements
           might be a source of some concern. For our part,
           we find them to be lacking in mechanisms through
           which the broader social concerns of computer/
           communications policy can be addressed in a
           continuing way. There are none among the proposed
           participants who can legitimately speak for "the whole
           man" and no mechanisms for providing for a "dialogue
           beyond roles"...institutional structures which are
           simultaneously more integrated and more decentralized
           than those proposed should be created. (16)

           It is our view that it is premature to discuss institutional
           arrangements. (48)

Observation:

    Many of the carriers have inferred that a number of new regulatory

bodies for computer/communications matters has been suggested. Perhaps

this has arisen for two reasons: first, by referring to "....the

appropriate regulatory body (at present, the Canadian Transport Commission).."

(p. 184), the report may have given the impression that a new regulatory

body or bodies is necessarily required; second, by prescribing a number

of new regulatory powers (p. 184) to the appropriate regulatory body,

the carriers may view such a revised role as a de facto transformation

of an existing and known entity.

3.2   Comments concerning the suggested Interdepartmental Committee within
      the Federal Government.

      Equipment: Consideration of these (broad social) issues will require
                  opinion and advice from several government departments,
                  and will need to be resolved at the most senior levels of
                  government. The Task Force also points out that a

number of federal departments have substantial interest in matters affecting the communications-served data processing services industry. We support the desirability of interdepartment policy coordination within the federal government...... (28)

Carriers: We would like to emphasize that should such a committee involve itself in areas pertaining to the development of national communications policies, (data or other), then we feel very strongly that the telecommunications industry representatives should be actively involved. (5)

Observation:

Most respondents considered that it was inappropriate to comment

upon what may be regarded as a normal administrative arrangement,

internal to the Federal Government.

3.3   Comments concerning the suggested Focal Point within the Federal Government.

Users: In considering the possible activities of the Focal Point in regulating the data communications network, we are of the opinion that it should work very closely with existing Government bodies, such as the Canadian Transport Commission (Telecommunications Committee) and, in fact, it could be part of that department. (56)

The creation of a "Focal Point" within the Federal Government to coordinate federal/provincial activities and computer/communications relations as well as promote cooperation betwen private and public sectors is highly desirable. (12)

The Focal Point should be a live and active participant not a passive red tape bound Government function. The Focal Point would best succeed if it is a dynamic coordinating force that is not afraid to go to industry -- not force industry to come to it in the form of boring, or long winded, once a year conferences. (1)

The "Focal Point" concept is a workable staff-type organization which we think is appropriately located within the Department of Communications....it will benefit from being part of a Department with the influence to successfully push its proposals. We hope that there will be generous publicity given to these so that an opportunity for criticism is available to interested parties. The members of the Focal Point should be accessible to all industry..... (33)

We feel that the recommended "Focal Point" approach on the part of the Federal Government should to a large degree bring about a measure of hardware and software standardization and compatibility which is lacking at present. The absence of this interface - particularly in the technical areas - is now costing the teleprocessing computer users excessive amounts of money.... (20)

Services: The sucess or failure of our government to guide and direct future policy will stand or fall on what the report describes as the "Focal Point". In our opinion, the proper structure of this group is the key. Our common sense suggests that the Focal Point must:
1) be set up to avoid any problems of interdepartmental rivalry;
2) include representatives from Treasury Board, DSS, etc., in order that key policies can be smoothly carried into execution;
3) contain representatives from departments where their major policies will be affected, e.g. IT&C, DOC; and
4) contain representatives from industry in order to coordinate the private sector and government. (32)

Because the dominant theme behind the recommendations is to encourage and support the development of a "strong Canadian-controlled data processing services industry", a more logical place for the "Focal Point" would be in the DOITC. One of this Department's prime responsibilities is the development and encouragement of a strong Canadian industry....The restrictive attitudes necessarily prevalent in a government department, such as the DOC in dealing with the problems of regulation and monopolies, are not consistent with the spirit of the Task Force's recommendations. (43)

We were somewhat concerned with potentialities for a too rigid approach to supervision that might result if a literal interpretation were to be given to some of the duties foreseen for the Focal Point....In the course of giving action to terms of reference of this breadth there could easily evolve a system of rigorous supervision that would be quite contrary to the whole theme of the report. (23)

We see the need for a certain amount of government involvement in the areas of support and encouragement. We believe, however, that the "focal point" to provide such government involvement should not exist in the Department of Communications. On the contrary, we identify a need for an interdepartmental agency capable of administering incentive programs, of fostering competition and innovation, of promoting dialogue between the public and private sectors and of encouraging the industry towards self-management. (24)

We support wholeheartedly the establishment of a focal
point within the Federal Government structure. In our
experience this is a unique and new idea which may
represent a significant departure from traditional ways
of looking at government machinery...It is difficult
to know just where the Focal Point should be located....
However, since it was the DOC which created the Task
Force leading to the idea of establishing a Focal Point
it should logically be located there. Furthermore, it
must be. in a position to make things happen.. Only by
locating the Focal Point in the DOC, together with the
necessary skills, resources and depth of understanding,
will the goals set forth in "Branching Out" be attained. (30)

Equipment: I think that a government originated research centre (as
implied by the report) should be established for the
purpose of creating a convergence between the art
and the science of information systems...I believe that
Dr. von Baeyer is the most capable person to head such
an institute, and I recommend that it be established
without delay. The first assignment must be to assess
the information generating, movement and processing
requirements of Canada.   (42)

We believe that any focal point for considering this
industry in its broadest implications should remain
independent from any single government department.
The proposed Interdepartmental committee on National
Computer/Communications Policy could itself be the
focal point to consider policies affecting the communi-
cations-served data processing services industry. It
is recognized that a secretariat to the Committee may
be required to provide staff support. Any required
functions of the "Focal Point" could readily be incorporated
into the responsibilities of the interdepartmental
committee and its secretariat. (28)

We believe that a coordinating body, such as an inter-
departmental committee can be serving as a focal point
for the data processing industry. However, this focal
point should be an advisory body and not an operational
group directing industry. (25)

We support the establishment of the Focal Point but we
think that its correct location within the government is
crucial to its success....we would disagree with it
residing in the DOC because it would place too much
emphasis on the communications aspects of the computer
industry. We would subscribe to it being affiliated
with either the MOSST or DOITC. (8)

We concur that there is a need for the coordination of
policies and practices within the Federal Government.....
we are concerned, however, that a permanent bureaucratic

entity, such as the recommended Focal Point, can become
an encumbrance which would tend to stifle innovation,
rather than promote it. We would suggest, therefore,
that the interdepartmental committee assume the essential
coordination functions. (15)

We are in complete agreement that interdepartmental
coordination in both the formulation of policies and in
operations is required within the Federal Government.
This requirment is not unique to the computer and tele-
communications industries....we belive that the inter-
departmental committee should function as the coordination
Focal Point, with technological support on a staff basis
as required. (4)

We strongly urge the Government to take immediate action
to implement the recommendation of the report that a
Focal Point be established. We believe that this should
be done within the DOC. (7)

Carriers: We can understand and appreciate the need for a coordinating
body in government....We are concerned, however, that the
concept of a Focal Point as recommended seems to go beyond
the policy-coordinating function into operational areas. (29)

We agree that the establishment of a Focal Point within the
federal government....would be desirable. We are concerned,
however, that the roles for the Focal Point spelled out in
Recommendations 16, 19 and 26 could be interpreted as going
beyond these terms of reference to extend directly into the
normal business activities of the carriers....(nevertheless)
an effective Focal Point in our view would be a necessary
catalyst in achieving a workable institutional framework
at an early date. (45)

We agree in principle with the suggestion that a Focal Point
be established in government. We see it really as a small
group in the DOC with which our industry will continue
to have direct dealings, as it has today. We believe the
functions of the Focal Point should be limited to strategic
planning and program coordination, and that it should not
assume functions properly the responsibility of regulatory
bodies and the carriers. (3)

In concept, "Focal Point" is an excellent idea, however,
we are unclear as to the extent of its authority. If
it is to be a forum for Federal, Provincial governments
and industry to meet and reach mutually agreeable under-
standings, then we would endorse it. If it in any way
infringed on the existing authority of provinces or
provincially regulated carriers, then we would not be
in agreement with its purpose. (5)

We see the "Focal Point" in government on computer/
communications matters being within the DOC. There
is a need to perform the functions of strategic planning
and programme coordination as defined on p. 179. However,
the expanded definitions on pp. 180 and 181 give us
cause for concern. (55)

We support the principle that there should be a "focal
point" to develop coordinated and cohesive policies
throughout the different departments, agencies and levels
of Government and to provide a mechanism for expression
of views by industry. We would see this focal point
operating in a role of recommending courses of action
to Government and industry. (17)

Misc: There is no doubt that the Task Force has developed its
concept of a "Focal Point" through genuine concern for the
need for coordination and an overview in policy development.
In principle, we agree with the concept of the "Focal
Point".....As indicated in the comment upon Recommendation
No. 4, we are concerned that the Focal Point, in the long
run, may not measure up to the high ideals of the Task
Force. The possibility that the Focal Point would become
a large bureaucracy or an "Ivory Tower" for development
in isolation of national policy would be a failure with
serious implications.....If the Focal Point is established
it is imperative that some effective mechanism for
participation by the Provinces be developed for its
activities. (27)

We see the Focal Point in the Department of Communications
acting in a role that only a government agency can handle:
as expediter, coordinator and transmitter of government
policy to the groups concerned and implementer of approved
policy. We see the Focal Point not in a policy setting
role so much as a repository of responsibility to acquire
funding, allocate contracts and ensure their fulfilment.
There is concern that the Focal Point may become too
powerful and will strangle initiative....it should perform
three functions: strategic planning; programme coordination;
and act as a Secretariat to the Interdepartmental Committee. (41)

We agree with the establishment of a "Focal Point", as
this would help to ensure an orderly development in the
the computer/communications field. To this end, we
recommend that you use our Association as one of your
Advisory Sources. (47)

It appears to us highly unlikely that a focal point
composed of government experts would be able to deal
with the fundamental issues we are raising....the activities
of the focal point may only serve to reinforce the ability
of those who control this new tool, aware or unaware, to
shape and control individual, family and group activity....

The suggested location of the focal point within a
department charged, as we understand it, solely with
the machinery of communications but not with its content..
is cause for a great deal of concern....the absence of a
more broadly-mandated point of reference....will tend to
result in placing predominant emphasis on the technological
concerns of industry rather than the communications concerns
of people. (21)

It is our view that all elements of the computer/communications
field must be assured of an adequate vehicle to make their
needs and views known. We think that the industry (users
and suppliers) should be given a much stronger voice at
the policy level, and we suggest that this might well be
accomplished by replacing the Focal Point as envisaged
in the report with a Computer/Communications Council,
having an organizational framework similar to the Science
Council. This Computer/Communications Council should be
completely independent of any specific government depart-
ment....top people could be drawn, on a part-time basis,
from both within and without the computer/communications
field.....We urge the formation of such a group before the
formulation of legislation in respect to the recommendations
of the Task Force. (53)

Observation:

   Twenty-eight respondents have commented specifically on the suggestion

that a Focal Point be created within the Federal Government.

Twenty-seven of these, either agree with this suggestion, or recognize

that the proposed functions need to be undertaken. Fifteen of these

respondents have expressed their preferences with regard to type or

location of the Focal Point as follows:

Department of Communications	6
Interdepartmental Committee (secretariat)	5
MOSST or DOITC	2
Canadian Transport Commission	1
Computer/Communications Council	1

   The comments addressed to the concept of the Focal Point reveal a

wide range of views concerning how it would or should function.

Depending on their point of view, the respondents regard it as an

institution that should be either active or passive, operational or

or advisory, regulatory or non-regulatory, or that it should have a

combination of these and other attributes. In a broad sense, it is

feasible to obtain a feel for the way in which the functions are viewed

by comparing the words used by groups of respondents. Thus:

Users: regulating, coordinate, promote, live and active participant, dynamic, influence, push, accessible, interface.

Services: execution, coordinate, encourage, support, development, administering, fostering, promoting, make things happen.

Equipment: research, consider, advisory, non-operational, coordination.

Carriers: coordinating, non-operational, catalyst, non-regulatory, forum, non-infringement, recommending.

Misc: expediter, transmitter, implementer, coordinator, funding, allocate, concerns of people, overview.

From this approach, there is an impression that the User and Service

segments, plus some of the Miscellaneous entities want a "dynamic,

operational, strong" Focal Point, whereas the Equipment and Carrier

segments would be more content with a "passive, advisory, catalytic"

Focal Point. It may further suggest that, on the basis of organizational

size within these segments, the large firms in the computer/ communications

field would not wish to see the emergence of a focus in Government that

was overly strong. Coordinate, however, is a word with which all

segments agree.

Comments concerning Federal-Provincial Collaboration

Services: We believe that the constitutional hurdles and jurisdictional problems which may limit cooperation in the computer/ communications area not only SHOULD BE OVERCOME but in fact MUST BE OVERCOME. The challenge to governments throughout Canada is to overcome regional, provincial and narrow self-interest in the greater interest of intelligent development of the computer/communications industry. (30)

Equipment: Current relations between the Federal and Provincial
             Governments in communications and other matters are not
             a source for optimism that the cooperation expected by
             the Task Force in computer/communications will be forth-
             coming.   (7)

Carriers: Many of our members are far more concerned with and
             affected by regional than national considerations and
             goals.   While we appreciate that the report fully
             recognized the need for the utmost federal-provincial
             cooperation and coordination, it is our view that some
             of the institutional arrangements proposed should be
             left in abeyance until federal-provincial roles in
             computer/communications have been clarified. (29)

             We agree that close collaboration between the federal
             and provincial governments is essential.   It may well
             be that the most important role of the DOC is to
             coordinate and promote satisfactory inter-relationships
             between the federal and provincial governments. (3, 5)

             Continuous harmonious relationships between Federal
             and Provincial Governments are essential to the fulfilment
             by industry of the Canadian computer/communications
             needs.   (55)

             Coordinated action on the part of the Federal and
             Provincial Governments is desirable to promote general
             development of computer/communications in Canada...(17)

Misc: We accept that this sort of close liaison and consultation
             is both desirable and necessary.   However, its accomplishment
             will present significant problems for the smaller provinces.
             These can be summarized as: (1) the danger of being 'over-
             whelmed' by the federal department, by tying up Provincial
             resources so that Provincial positions on policy questions
             cannot be determined; and (2) the problems associated with
             making the consultations bilateral.   Sufficient time must
             be allowed for preparation.   (27)

             While an exchange of views on regulatory practices would
             be worthwhile, it would perhaps be premature until such
             time as it was determined that the objectives and policies
             of the governments involved were compatible.   (27)

             A matter of concern is that federal and provincial
             government policy with respect to computer/communications
             must be properly and fully coordinated.   We believe that
             provincial agreement should be secured before federal
             legislation is drafted.   In our view, however, the Task
             Force has not found the appropriate vehicle for obtaining
             this agreement or for encouraging ongoing cooperation
             and coordination.   (53)

Comments concerning the role of the Telecommunications Regulatory Body

Carriers: Clarification of broad federal and provincial government
policies in the total telecommunications regulatory
environment is essential before we can comment specifically
on this matter. This industry has historically operated
in a satisfactory climate involving both federal and
provincial agencies. The interaction of federal and
provincial regulatory decisions on computer communications
must be fully considered and balanced if national and
provincial regulatory goals are to be achieved. The role
of any regulatory body in computer communications should
not be established in isolation from the fundamental
regulatory role in the whole field of telecommunications. (3)

This industry has historically existed in a satisfactory
regulatory climate involving both Federal and Provincial
Agencies. The type of institutional arrangements proposed
do not appear to recognize this existing Canadian Tele-
communications regulatory framework, which we believe
has demonstrated its ability to meet Canada's regional
aspirations in the telecommunications areas and we believe
these arrangements could also serve adequately the computer
communications areas. (5)

We are in agreement with the division of powers between
government and industry as summarized on page 5 of the
TCTS submission to Telecommission Study 7 (ab):
"the role of government is to define the policy
by means of statutory enactment;
the role of the regulatory authority is to
regulate in accordance with statutory enactments; and
the role of management is to manage the industry."
The Task Force's report appears to recommend the transfer
of some management responsbilities and certain additional
discretionary powers in lieu of legislation to the
Regulatory Body. We disagree with this. (55)

Observation:

The recommendations of the Task Force do not attempt to modify the

present regulatory system involving both federal and provincial agencies

(except for the suggestion that some means of achieving compatible

decisions should be explored) for no new regulatory body was suggested

for computer/communications issues. Nor do the recommendations, in

fact, transfer management responsibility to the regulatory agencies.

The need for flexibility in this rapidly developing field, and the

difficulties of drawing up statutory definitions were

considered important factors by the Task Force. This is covered

on p. 185 of "Branching Out" where it is stated that "...These

(administrative) policies are not meant to be embodied in statutory

form, but would be the subject of detailed regulations passed by the

regulatory body after due consideration at public hearings at which

both industry and government views could be made known. If or when

problems arise with regard to the day-to-day administration of the

regulations, they can be amended by the body to take account of these

problems..."

3.5   Comments concerning the role of a Registrar of National Computer/
Communications Networks.

> Users: ...we did not agree with the proposal for a Registrar
>   of National Computer/Communications Networks.   (31)
>
> Equipment: We believe that the proposed function is unnecessary....
>   it may tend to inhibit competition and may tend to
>   discourage those who might contract out their spare
>   data processing capacity from entering the market...
>   the Registrar would tend to collect data long past
>   its period of essential usefulness...because of the
>   Registrar's inability to have access to data banks
>   or data processing systems employed by Canadians
>   but located in foreign countries, its information
>   would be incomplete....Any essential information
>   requirements should be clearly defined and included
>   in the current study of Federal Government data
>   collection currently being undertaken under the
>   chairmanship of the Department of Consumer and
>   Corporate Affairs.   (4)
>
> Carriers: This matter has implications in terms of provincial
>   and federal corporate law and constitutional
>   jurisdiction in Canada, and extensive review in
>   both these areas would be required before the
>   "appropriate body" referred to in Recommendation
>   23 could be established. There is also to be
>   considered the possibility that existing bodies
>   could fulfil the broad role suggested for the
>   Registrar. (3)

It is the responsibility of government to decide on the
need for registration of computer/communications systems.
Due to the impracticality and cost of registration and
enforcement we therefore urge that this elaborate procedure
not be established unless there be a clearly defined need
such as abuse of Canadian privacy, unfair competition, or
other reasons. (55)

Observation:

The comments on the role of the proposed Registrar should be considered

in conjunction with those relating to the need for, and functions of

registration contained under Recommendation 23. As observed in that

connection, the opposition to registration carries over to the role

of the Registrar.

The Report of the Task Force on Privacy and Computers points out

(p. 182) that the proposed Registrar might well be an appropriate

public official for the registration of Canadian companies and agencies

making substantial use of data banks outside the country.

3.6 Comments concerning the role of the Competitive Practices Tribunal.

Carriers: It is difficult to comment specifically on this,
particularly since the new competition act is still
under review. The work that is now going on in the
Department of Consumer and Corporate Affiars in
drafting legislation will presumably consider these
matters. (3, 5)

Anti-competitive practices should be remediable
under law. The legislation, now being drafted in
the Department of Consumer and Corporate Affairs
will presumably consider these matters. (55)

3.7 Comments concerning a Computer/Communications Industry Planning Board.

Users: The recommendation to establish a Planning Board
similar in function to the CRTPB is a good one.
Some form of regional recognition should however
be given to the meeting location of this board.
Our own interests are sufficiently unique that we
would want them represented by a knowledgeable
participant. (33)

Services: The longer term or advisory activity which will
              be a continuing feature of a number of the 'Branching
              Out' recommendations should rest either with an
              Industry Council or with the suggested CCC/IPB. (30)

Equipment: The need for an Industry Planning Board is acute,
              and we see its main function as the filtering of
              the various views of the various bodies into some-
              thing that can be more clearly understood and acted
              upon by the government. There are many key issues
              (the customs tariff being only one) which the government
              should act on quickly, but the public and the industry
              is unable to force quick action because the issues have
              been so poorly presented. (8)

              Wewelcome this proposal and, if it is implemented,
              would want to be represented on the Planning Board....
              Because the representatives of industry will be
              aware both of the needs for industrial innovation
              and of the capability of the industry to respond,
              we suggest that the proposed CCC/IPB act as an
              advisor to the Government on the allocation of
              incentives. (7)

Carriers: The proposal for the establishment of a forum with
              the general terms of reference suggested by the
              Task Force would seem to have considerable merit.
              It would provide a medium for insuring joint
              participation of government and industry in the
              development of national policies. This concept
              is somewhat analogous to the recommendation made
              by TCTS in the telecommission studies for the
              formulation of a national telecommunications
              advisory council. We feel that the function of any
              forum of this kind would be essentially advisory
              in nature, and not involved in actual planning as
              may be interpreted from the present suggested title
              for the Board. (3)

              It would be unrealistic for us to offer any definitive
              comment on this broad concept until such fundamental
              practical matters as membership, constitutional
              arrangements and like matters have been satisfactorily
              developed. However, on the surface we see this Board
              acting as a clearing house for computer/communications
              matters which could be done within industry. (5)

              We agree with the concept of an organized body of
              representatives from the computer/communications
              private sector to meet and discuss problems. This
              should be an advisory rather than a planning body.
              Therefore, the title Computer/Communications Association
              would be more appropriate. (55)

We would suggest that the CCC/IPB rather than the
Focal Point should have primary responsibility for
identifying user needs and should include external
as well as internal requirements. The findings of
the Board could be made known to the Focal Point
on an annual or other predetermined basis. (13)

The concept of a CCC/IPB appeals to us as one way
in which the views of the industry on policy matters
could be communicated to government. This Association
would wish to be associated with such a Board in
an active manner right from the conceptual stage,
and offers whatever assistance it can in getting
such a policy advisory body underway. (29)

Misc: The Planning Board would consist of representatives
          from user and supplier associations to assist in
          the development of national policies. It would
          provide our members with a continuing forum for
          airing their views. The meetings in general would
          not involve government representation except by
          invitation...We recognize the responsibility that
          participation on the Planning Board would place
          on us as an association. On the basis of accepting
          the recommendation, we feel that a more responsive
          organizational pattern must be adopted by our
          assocation. (41)

Observation:

Respondents seem generally well disposed towards this suggestion,

although it must be pointed out that some of the major manufacturing

organizations have failed to comment on this proposal. Some of the

carriers take exception to the word "planning" in the title of the

proposed Board. This seems generally consistent with their antipathy

towards any intimation of impingement upon their managerial prerogatives.

3.8   Comments concerning the role of the Canadian Standards Association.

     Equipment: We endorse the suggestion of the Task Force to encourage
                 and strengthen the role of the CSA. (28)

     Carriers: We agree that the CSA should, as recommended, expand
                 its role to include comprehensive development of
                 computer/communications standards for Canada. (3)

                 We agree that the CSA should strengthen itself, and
                 we visualize government as a user member. (5)

Further to our comments under Recommendation 36, we agree that the CSA organization should be able to expand its role to include development of computer/communications standards. However, prime responsibility for network standards must remain with the carriers. (55)

Misc: We would like to see a program wherein Canadians can participate from any province without regard to travel costs...Grants for research to enable standards groups to support projects that require a greal deal of manpower would enable the CSA to do a job second to none in the world. Some of the standards work will have a direct bearing on the productivity of Canadian EDP users and software exporters. (41)

We have reservations concerning the rationale presented in the report for choosing to amplify the role and size of the CSA to deal with the establishment of computer/communications standards. It is imperative that users as well as equipment suppliers should have a significant role in setting standards for hardware/software compatibility. We observe that the CSA appears to be more hardware than software oriented. Preparation and adoption of software standards presents a much broader spectrum of problems, involves a greater number and diversity of people, and gives rise to situations where agreement will be more difficult to reach. (53)

Observation:

With regard to the reservations of Respondent (53), the report of the Task Force noted the need for user participation in the standards setting process. This participation was envisaged as being undertaken through user associations which would be affiliated with the CCC/IPB.

4   Other Comments by Respondents

    This section relates to comments made by Respondents concerning

matters which they believe to be important, but which have not been

covered or which, in their view, have not received sufficient

attention in the Task Force Report.

4.1   Customs tariffs on computer/communications equipment

        Equipment: We recently submitted a brief to the Tariff Board
                    which recommended:
                    a) a tariff schedule for computers and related
                        equipment should be established;
                    b) a zero tariff rate should apply;
                    c) a zero tariff rate should also apply to
                        software.
                    It was noted that tariffs, themselves, have not
                    created the climate for increased computer
                    manufacturing in Canada. Production has come
                    about only through rationalization by individual
                    companies. The necessary climate in Canada has
                    been created through incentives other than
                    tariffs. (4)

    Observation:

    A number of equipment manufacturers have commented on hardware

customs tariffs. The Task Force referred to customs tariffs in a

number of places in its Report (e.g. pp. 138, 160), but did not take a

specific position in regard to hardware in view of the Tariff Board study.

It recognized, however, the need to review tariff policies for

hardware and computer service products, in order to complement the

policies recommended to support the domestic supply industry.

.2   Capital cost allowances for computers and related equipment.

        Equipment: We have repeatedly requested a review of these
                    items, and we have advocated an increase in
                    the rate from the current 20% to 40% for the
                    following reasons:
                    1. 20% on the declining balance results in
                        one-third of the original cost remaining

at the end of 5 years and almost 11% of
the original cost after 10 years.

2. The current rate is not responsive to the
   capital intensiveness and rapid technological
   changes of the computer industry.

3. The U.S., U.K., France, Japan, Italy and
   other countries have permitted faster
   write-offs than Canada.

4. Users hesitate to replace existing equipment
   which is not fully depreciated. Therefore
   the move towards new equipment with its greater
   efficiency is postponed and the user is
   penalized in competing with foreign businesses.

5. A 40% rate would mean reduced cash outflows,
   giving reduced interest expenses and more
   capital for further investment.

The two year write-off announced in May, 1972 is
only an interim measure. We believe that a higher
capital cost allowance rate for this equipment
should be a permanent part of Government strategy
for lowest costs to computer/communications users. (4)

4.3   Domination of the computer equipment market by one manufacturer

Services: The suggestion that the computer equipment suppliers
            regard the data services field only as part of a
            strategy aimed at developing the equipment market,
            I believe is erroneous in that these suppliers
            have expended considerable sums developing services
            for markets not served by hardware (small retailers,
            automotive dealers, stock-brokers) as ends in
            themselves (and most profitable ends). Revenues
            and profits from data services divisions are
            often higher than many hardware divisions. (43)

Misc: We believe that the position taken by the Task Force
            in regard to computer equipment suppliers requires
            reconsideration. In particular the domination of
            the computer equipment market by one manufacturer
            has implications which have not been fully stated.
            For example, no apparent consideration has been
            given to the possibility that a dominant supplier
            would be capable of both advancing and retarding
            technological development in a market of national
            importance. (53)

            The report states (p. 101) that service bureaux of
            equipment suppliers "usually exist primarily as an

adjunct to the (equipment) marketing operation".
The implication seems to be that the market
dominance of these types of service bureaux
cannot be important because such bureaux are a
relatively minor aspect of the total functions
of their companies. This ignores the very real
possibility that such service bureaux may effectively
dominate the service market to the detriment of
effective competition...Although the Task Force
has given considerable attention to the potential
of market dominance by carriers and banks, we are
concerned that it has apparently not given sufficient
consideration to the problems of market dominance
in these other areas. We are not prepared to make
judgements here about the virtues or defects of
market dominance in some major areas of the computer/
communications industry; rather, the report does
not discuss its existence, and therefore does not
provide a basis for policy judgements in an area
of great importance. (53)

Observation:

The Task Force did not intend to give the impression that the

service bureaux of equipment suppliers were unimportant adjuncts to

their main endeavours. Indeed, it did not suggest that their service

business was necessarily unprofitable, and was used merely as a device

for familiarizing potential customers with their own brands of hardware.

Nevertheless, the Task Force is still of the opinion that the main

strategy of hardware suppliers is to sell hardware.

SUMMARY AND CONCLUSIONS

General

The written comments by respondents to the Canadian Computer/
Communications Task Force Report Branching Out reveal widespread
agreement with the thrust and direction of the report. The ratio
of those respondents expressing general agreement, against those
who are generally opposed or who have basic reservations, is in
the order of 6:1.

In addition, the very presence of the Task Force may have had a
salutary effect upon the computer/communications environment, for
in the words of one respondent: "We are pleased to report the
notable degree of improvement which we experienced in the last six
months on the part of both our computing hardware and software
supplier's and our common carrier's attitudes as they relate to one
another and to ourselves, in helping us to attain our objectives." (20)

Concepts

The approach employed by the Task Force in arriving at its conclusions
recommendations and suggestions, has been the subject of some criticism
by a number of respondents. First, concern has been expressed with
the treatment of the subject matter "computer/communications" in combination.
The danger in this, respondents contend, is that the treatment necessary
for dealing with the highly regulated communications environment spills over
into the highly competitive data processing environment where a different
mode of thought is required. Whether or not this criticism has justi-
fication, the Task Force believes it has avoided prescribing the kind of
regulatory mode referred to, and has instead made recommendations that

would maintain the freest possible environment for data processing.
Second, a small number of respondents were concerned that the Task
Force approach should have paid far more attention to information
content and the purposes the facilities should serve, rather than
simply with the means of computer/communications. Third, two social
institutions have expressed their deep concern and disappointment
with the report alledgedly because it failed to have as its overriding
concern and fundamental point of departure, the social needs of
Canadians, and how they might be met by computer/communications
technology. Both briefs suggest that it is not possible to arrive
at an acceptable computer/communications policy, or indeed any
public policy, until much broader sections of society have been
given the opportunity to engage in a dialogue about the direction
that such a policy should take. National communications policy, or
any part thereof, is seen to be the key to facilitating debate and
involvement in the formulation of all public policies. In the view
of the Task Force, much more study and experimentation is required
before it can be ascertained just how computer/communications technology
can meet social needs of Canadians in a direct way. It does not
believe, however, that the uncertainty surrounding this question should
be used as a reason for delaying actions designed to strengthen Canadian
developments, participation and expertise in order to maintain a Canadian
presence in this field.

RECOMMENDATIONS

.1 General Recommendations: Recommendations R 1-4

Fairly widespread support exists for the general recommendations. However,
some reservations have been expressed about (a) increased government
involvement; (b) the potential results of future government involvement;

and (c) the specific actions that are envisaged, particularly as
they relate to what the carriers feel may be encroachments upon
the prerogatives of management.

.2 <u>Data Processing Services: Recommendations R 5-9</u>

The outright opposition to carrier entry has somewhat diminished,
but widespread concern is now expressed that their entry may jeopardize
their prime responsibilities in the data communications field. A
few respondents have interpreted the recommendations relating to carrier
and bank entry as open invitations to become the dominant participants
so as to reap the 'benefits' of large Canadian-owned economic units.
The restrictions that should be imposed on the data processing affiliates
of carriers received much comment. Many respondents are opposed to the
processing of the base workload of the parent, and are concerned that
cost allocations will be impossible to police. The Provincial Carriers
feel the arms-length restriction to be unnecessary and costly in the less
industrialized areas. The banks see no reason for limiting their scope,
while the independent service bureaux now view the banks as their most
dangerous potential competitors particularly in view of possible unfair
competitive advantages. The participation by universities in the data
processing services business is the subject of criticism by the
independent service bureaux, and also by other organizations.

3 <u>Data Communications Services: Recommendations R 10-21</u>

Most respondents agree that distance is becoming less important as a
factor in pricing, but whether this can be specifically recognized for
'certain special services' remains uncertain. The functional separation
of voice and data communications services appears to have the support of
most carriers. The liberalization of foreign attachment policies is
widely endorsed by users, service and equipment suppliers. The carriers,

however, have a number of reservations, including the limitation of the
definition of "foreign attachments" to 'terminal equipment'. As expected,
all carriers have voiced concern about the recommendation for the resale
of services by raising the arguments of cream skimming and economic
infringement. The federally-regulated carriers, however, appear to be
prepared to accept non-carrier resale and line-sharing under certain
well defined conditions. In regard to the interconnection of networks
issue, the telephone companies are opposed on the grounds that inter-
connection and competition are mutually exclusive. One respondent
pointed out that, should the regulatory body be empowered to conduct
hearings on problems of network interconnection, then the adoption of
this recommendation (Rec. 17) would lead to problems where interconnection
between organizations responsible to different regulatory bodies was at
issue. There is some opposition to the Focal Point taking periodic
cognizance of carrier plans. Carriers see potential infringements on
their managerial prerogatives in this recommendation (Rec. 19). There
is general agreement that the government should intensify its work in
defining the Canadian position on data communications in the international
area.

Data Services Environment: Recommendations R 22-25

There is widespread support for improving service availability and reducing
costs in Canada in order to counteract external advantages. This is in
contract to the substantial opposition to the registration of commercial
data services via telecommunications facilities. The importance of a
strong Canadian-controlled data processing services industry has been
widely recognized and supported, although some multi-national enterprises

are concerned that "Canadian-controlled" does not become equated
with "Canadian-owned". Similar sentiments have been echoed with
respect to the conveyance of cultural values. One or two respon-
dents suggest that this will be a case of 'too little, too late.'

3.5   Priorities of Government Support: Recommendations R 26-30

The identification of user needs is a point of contention with some
respondents. Many of these believe it to be essentially a marketing
function and impinges on managerial responsibility. The stimulation
of special computer/communications systems having broad social
benefits by means of pilot projects has received wide support. This
support is carried over to those projects which involve the formation
of systems in the public sector. The fostering of multi-disciplinary
research on the long-range social effects has received moderate
agreement, with few adverse comments. This cannot be said, however,
of the programmes for government research laboratories. Many respondents
were critical of this recommendation particularly in view of the
pronouncements of the MOSST.

3.6   Government Support of Industry: Recommendations R 31-32

The efforts to ensure that multi-national corporations devote sufficient
funds towards their Canadian research and development activities has
received fairly widespread approval. Some of the equipment manufacturers
believe that the problem is intimately connected with customs tariffs,
while one Canadian-owned company believes that this recommendation will
simply aggravate an already unwieldy situation. There is general support
for the granting of incentives to Canadian enterprises to encourage innovation.

3.7   Education and Training: Recommendations R 33-35

The encouragement of professional and industry associations to provide

training programmes has received wide support. This is true also for

post-secondary educational institutions. The universities and their

associations, however, have objected to the lack of recognition given to

the importance of computer science.

3.8   Standardization: Recommendations R 36-37

There is moderate support for these recommendations, with some degree

of mistrust of government involvement, and some concern on the part

of the carriers that network standards are, and must remain, their

prime responsibility. They also note their earlier comments on inter-

connection, when the subject of standards in regard to the interconnec-

tion of networks is raised.

3.9   Government as a User: Recommendations R 38-39

There is generally strong support for these recommendations, with certain

cautionary notes made by some interested parties. One equipment suppliers'

association would have these recommendations apply to all Crown Corporations

and publicly funded institutions, while one Federal Crown Corporation

takes exception to such a proposal.

4   SUGGESTIONS FOR INSTITUTIONAL ARRANGEMENTS

4.1   Reactions to the proposed Institutional framework

About ten respondents have commented on the need for new institutional

arrangements or on the suggested arrangements as a whole, and their

reactions have been mixed. Certain carriers seem opposed to anything

which might lead to a new regulatory climate, and add that it would be

most unwise to accept additional institutional measures without consideration

of existing jurisdictional aspects. One of the social institutions
considers the proposed arrangements a source of concern, and it sees
the need for structures which are simultaneously more integrated
and more decentralized. The remaining comments generally endorse
the suggested framework.

.2   The Interdepartmental Committee

No adverse comments pertaining to this arrangement have been recorded,
and the idea appears to have general, although mostly implicit support.

.3   The Focal Point

This proposed institutional arrangement has received more comments than
any other. Of the respondents who have commented specifically on this
arrangement, an overwhelming majority recognize that the proposed functions
need to be undertaken. Less clear are the respondents' preferences as to
how or where these functions should be carried out. The largest number
believe that the Department of Communications should become the location
for the Focal Point, followed closely by preferences for the Interdepart-
mental Committee to perform the functions prescribed. It must be noted
however, that a number of comments indicate either a misconception of
the internal workings of government, or a misunderstanding of the Task
Force conception of the functions that a Focal Point should perform. While
it is difficult to make generalized statements, because of the exceptions
which arise in such a complex area, an analysis of the comments gives an
impression that the user and computer services segments wish to see a
strong, active Focal Point, whereas the equipment and carrier segments
would prefer an advisory, passive entity. It would also appear that the
larger and more firmly entrenched the organization is, the more likely
it prefers a Focal Point of the passive, advisory variety.

.4   Federal-Provincial Collaboration

This is seen to be a highly desirable objective by all respondents who

have commented. A number of problems are cited that may prevent the easy attainment of this objective.

5   The Role of the Telecommunications Regulatory Body

Three carriers have commented specifically on this matter. They make three basic points: that federal-provincial regulatory policies must first be clarified; that the role for computer/communications regula- tion cannot be established in isolation from the role for all telecom- munications; and that regulations must be in accordance with statutory enactments, not by discretionary powers.

6   The role of a Registrar

There is general disagreement with the recommendation for registration, and therefore, with the role of and need for a Registrar. However, this is in contrast to the widespread agreement for registration of data banks received by the Task Force on Privacy and Computers, who considered that the proposed Registrar could also fulfil the latter function.

7   The role of a Competitive Practices Tribunal

No comments of substance have been received in this regard.

8   The Computer/Communications Industry Planning Board

There is general, and in some instances, strong support for this proposal. Unfortunately, some of the major manufacturers have failed to comment, and it is difficult, therefore, to judge the breadth of support. Some of the carriers have taken exception to the term "planning" in the title of this proposed body.

The Role of the Canadian Standards Association

There is general agreement with these proposals. One carrier observes that prime responsibility for network standards must remain with the carriers.

OTHER COMMENTS BY RESPONDENTS

There were few concerns of respondents that had not been covered to some degree by the Task Force Report. A number of equipment manufacturers remain concerned about customs tariffs. One industry Association has restated its case on the subject of capital cost allowances for computers and related equipment, which it believes should be brought into line with allowances existing in other countries. If this were to be done, it contends that costs to users would be lowered, and that a further stimulation of the equipment market would take place. One professional assocation is concerned with the possibility of a dominant computer equipment supplier being able to advance and retard technological development, and with the possibility that the service bureaux of equipment suppliers may dominate the service market to the detriment of effective competition.

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Canada. Dept. of Communications
Written comments and reactions...

Gov't Repts

DEPARTMENT OF COMPUTER SCIENCE
McLENNAN LABORATORY
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